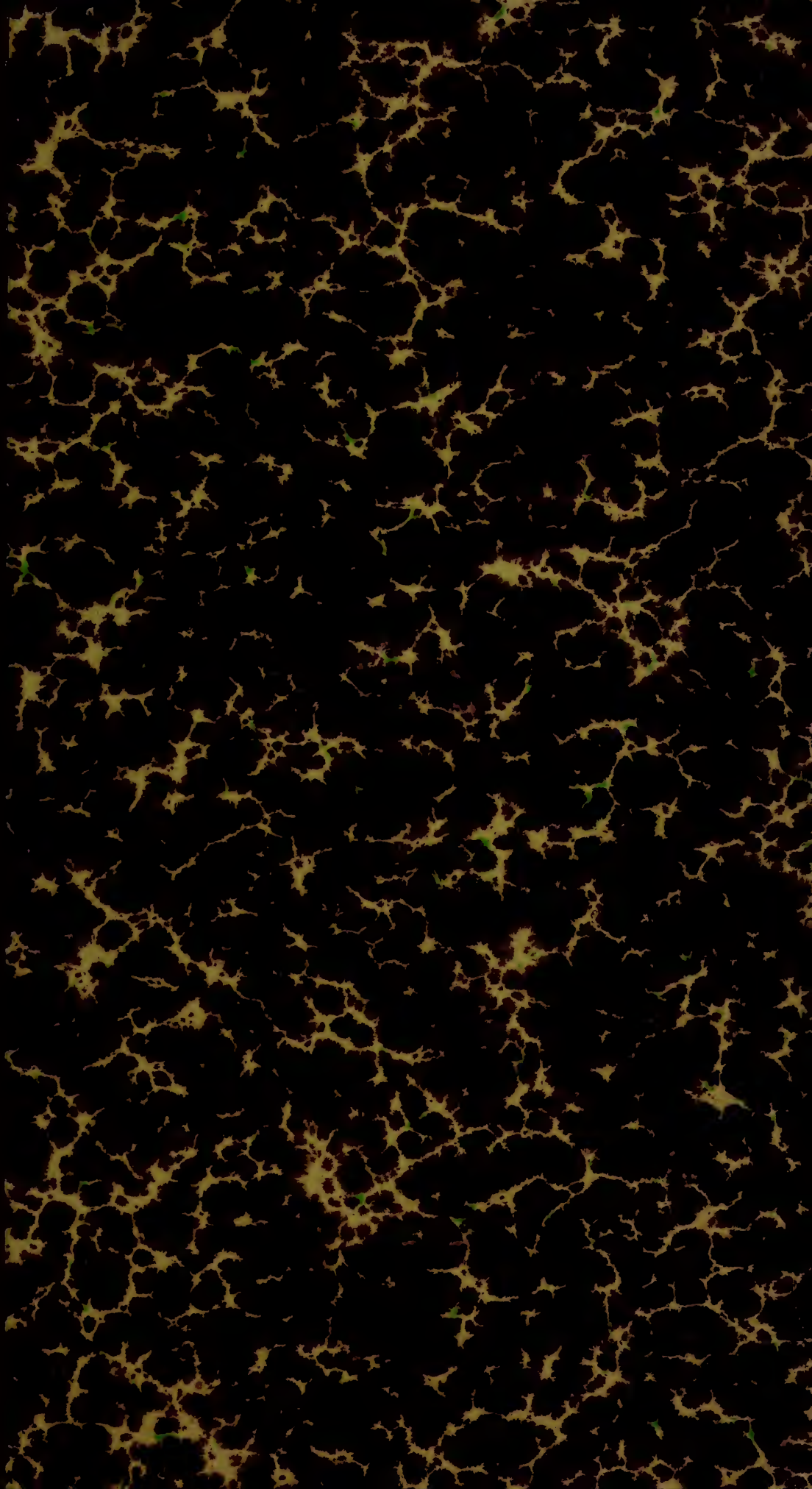

THE EUGENICAL NEWS

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EUGENICAL NEWS

VOL. VII. JANUARY, 1922 NO. 1

BRADFORD OF PLYMOUTH.

William Bradford was born 1590 in Southern Yorkshire of yeoman stock, that had an interest in learning above the average. Early orphaned and reared by harsh uncles, he embraced "Puritanism" and fled at seventeen years to Holland. In 1620 he left in the "Mayflower" for America and eventually landed at Plymouth. Of this colony he, the next year, became Governor and held this Office for thirty years, though (at his own request) not continuously. When the New England Colonies federated in 1643 he was a commissioner to the Confederation and was twice elected president of it. He died in 1657.

Bradford held his position by virtue of his far-sightedness. He made peace with the Indians, nipped conspiracies in the bud, sent agents to England to counteract false tales about the colony, undertook great financial enterprises in his own name for the good of the colony, founded tributary colonies on the Massachusetts and Maine coasts; opposed the spread of the Dutch in New England, promoted federation in New England. He foresaw future needs of historians and was the historiographer of the Old Colony.

Bradford was a tactician. When the malcontent Lyford organized a rebellion, though he knew of Lyford's treachery, he waited for days until the conspirators should all be assembled and then all be apprehended at once. When the Dutch menace impended, his letters were painfully courteous, yet carried the thinly veiled purpose of resisting any attempt at loss of independence. He knew how to nip in the bud the threatened massacre planned by the chief "Massachusetts." He resisted attempts at communism, and became the wealthiest man of his community. Intelligence and good judgment marked his period of service.

Bradford had an agreeable personality. He was as religious as any of his people, mild yet firm, cool, patient, forgiving and yet capable of inflicting deserved punishment. He harbored none of the crass superstitions of his day. He was an unfailing optimist. Many of his numerous descendants carry the excellent traits that he showed.

A. H. Plumb. William Bradford of Plymouth. Boston: R. G. Badger, 1921. 112 pp. $1.50.

GLANDS AND PERSONALITY.

Dr. Louis Berman, an associate in Biological Chemistry at Columbia University, has written a very interesting resumé of our knowledge of the effect of endocrine glands upon development, sex and behavior. The extraordinary interest of the book lies not so much in its novelty (though the data have not hitherto been brought together in just this way) but in a literary style which is unusual in scientific books. Perhaps some would allege that this is not a scientific book, since not all statements that are made are carefully guarded. No doubt this is true. Yet the book is stimulating none the less: and we feel that we should like to take the assertions of the author as hypotheses for scientific testing. Somewhat sensational is the attempt to show the endocrine disfunctioning of geniuses. Every student of personality will want to possess and read this book.

L. Berman, M.D. The Glands Regulating Personality. The Macmillan Company, 1921. 300 pp.

HEREDITY OF GEORGE NICHOLS.

George Nichols, born July 4, 1778, in Salem, served for a while as clerk, and at seventeen sailed on a merchant vessel "to see the world." He continued to go to sea as supercargo, and later as captain and part owner until he was twenty-six years old. He then went into commerce and prospered; but lost all his ships in the War of 1812 by privateers, and was ruined. Later he went into the auction and brokerage business. He died in 1865.

Love of the sea was a prevailing passion. He early learned to spend much time in the sea near Salem and he states that he always had a strong desire to pursue a seafaring life. There was a marked love of adventure. His father was a retired sea captain but with the marriage of George to Sarah Peirce this trait was lost to the sons. George Nichols had some literary capacity and wrote his autobiography. His brother, Ichabod, wrote some famous religious books. George's son George became a literary critic. He had good judgment in business, and this trait has been handed down through three generations of descendants.

Martha Nichols. A Salem Shipmaster and Merchant: The Autobiography of George Nichols. Boston, Four Seas Co., 1921. 127 pp.

EUGENICS EDUCATION SOCIETY.

At a meeting of the Council of the Eugenics Education Society held at 11, Lincoln's Inn Fields, Nov. 1, 1921, there were present Major Darwin, in the chair, Lady Chambers, Sir Robert Armstrong Jones, Miss E. Corry, Mr. Fisher, Dean Inge, Miss Kirby, Mr. Lidbetter, Prof. E. W. MacBride, Mrs. Potten, Mrs. Neville-Rolfe and Mr. Fleischl. The treasurer read a favorable financial report. Major Darwin gave a report on his visit to the Congress in New York. The Galton Laboratory and the Eugenics Education Society were nominated to the International Commission of Eugenics for representation thereon. It was announced that Dr. MacDonald was the new Secretary of the Liverpool Heredity Society.

EUGENICS IN INDIA.

The Indian Eugenics Society was organized at Lahore on Monday, June 20, 1921. The Secretary reports over 150 members with branches at Lahore and Simla. It has issued fifteen leaflets in the Indian and English languages, and has supplied over twenty lectures and papers. Among the members of the society are representatives of the Panjab Legislative Council and Indian Legislative Assembly. The General Secretary is Gopalji Ahluwalia, Imperial Hotel, Lahore, India. The first leaflet bears the date of July 9, 1921, and begins with Galton's definition of eugenics. The aims of the Society are listed as follows: (1) To urge the importance of a critical study of problems relating to race improvement from Indian point of view and having regard for Indian traditions and present conditions. (2) To spread a knowledge of sex and heredity so far as that may affect the improvement of the race. (3) To modify and direct matters relating to human parenthood according to eugenical ideals. (4) To further Eugenic teaching at home, in the school and elsewhere.

EXPERIMENTAL CONTROL OF HEREDITY.

Dr. A. R. Middleton (Amer. Soc. of Zoologists at Toronto) finds that paramecia kept in 0.2 per cent. normal saline (and food) divide faster than those kept in distilled water (and food) as a control. If after a time the saline cultures are put in a 0.1

per cent. salt solution they continue their rapid division for 10 days subsequent to 10 days in the 0.2 per cent. saline; for 60 days subsequent to 30 days in the 0.2 per cent. saline. The modification of the fission rate due to the strong saline solution persists in the weak solution—the induced modification of the division rate is inherited.

HEREDITARY BLOOD QUALITIES.

In the *Journal of Immunology* for September, Dr. R. Ottenberg tells of the work done by von Dungern and Hirschfeld and others on the agglutinogens A and B of red cells. The results of these investigations are applied to the question of disputed paternity. If the child's blood is the correct group for the alleged parents, then the child could be their offspring, but need not necessarily be. But, on the other hand, if the child's group is wrong for the two asserted parents, then one can say with absolute certainty that the child must have a parent other than one of those asserted. The same evidence can be used, either to prove the illegitimacy of the offspring or (circumstances being reversed) to prove the innocence of a corespondent asserted to be the father of a given child. In infants and very young children the test can be relied on only if it shows definite group characteristics, which it does in the majority of cases. The test can be easily done with a few drops of blood obtained from a painless prick with a small needle. Considering this, and the importance of the questions often at issue, it seems as though some legal means could be devised by which the persons concerned could be compelled to allow the examination at the hands of a representative of the court. (Jour. Am. Med. Assoc., Dec. 17.)

THE CRÔ-MAGNON MAN IN SWEDEN.

In the September–October, 1921, number of *Natural History*, N. C. Nelson, of the staff of the American Museum of Natural History, in the course of a paper on "Recent Activities of European Archæologists" says "that the tall, narrow-skulled people of present-day Sweden are direct descendants of the highly gifted, narrow-skulled Crô-Magnon men of Palæolithic France and central Europe is the opinion expressed by Oscar Montelius of the National Museum, Stockholm. His views on this and related topics are set forth in the April number of the *Antiquarian Journal* of London. . . . The article, unfortunately, is too brief to be convincing; but a statement of such importance coming from one of Europe's foremost veteran archæologists compels attention.

". . . It is estimated that he (the Crô-Magnon man) arrived in southern Sweden about 15,000 years ago.

". . . No direct proof is offered by Montelius that it was, in fact, the Crô-Magnon man who brought these cultural traits to the Baltic shores. It is pointed out merely that the stature and skull form of the Crô-Magnon man—said to be the only inhabitant of central Europe during the Upper Palæolithic—were much like those of the present Nordic stock, typical especially of the central inland districts of the Scandinavian peninsula. The connection between these two peoples receives further confirmation through the fact that archæologic and linguistic studies in Sweden both indicate, it is said, that no other people ever inhabited the southern and central portions of the region mentioned. Thus the oldest skulls discovered are held to be dolichocephalic, and the geographic place names are considered to be of Swedish derivation."

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January 1922.

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November, 1921.

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December, 1921.

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PERSONAL NOTES.

Dr. Mabel Hattersley Pearson, '10, is physician to the students at Bryn Mawr College, Bryn Mawr, Pa.

At the Eastman School of Music, Rochester, N. Y., a research Department in the psychology of music is being organized by Dr. Hazel M. Stanton.

Mr. G. H. Knibbs, formerly of the Statistical Office of the Commonwealth of Australia, has resigned his position to accept a directorship of the Institute of Science and Industry. His present address is 314 Albert Street, E. Melbourne, Victoria.

Prof. Dr. Lad. Haskovec of Prague, Czechoslovakia, one of the leading factors of the eugenics movement abroad, is a member of the Eugenics Commission seated at Liège, Belgium. This Commission has been organized by the "Institut International d'Anthropologie" of Paris. Dr. Haskovec's collaborators are: Prof. Winiwarter of Liège, Dr. Frets of Rotterdam, and Dr. Krizenecki.

Dr. John Joseph Kindred, who has been interested in Eugenical studies for some years, and who has contributed a few articles on this subject, is, as a member of the House of Representatives, U. S., from the Second New York (Queens Borough) District, giving close attention to National Legislation relating to medical and welfare matters. His speech on "Medical Treatment and Hospitalization of Ex-Service Men Suffering from Insanity and Nervous Diseases; Benefits to Them to be Conferred by the Sweet Bill—H. R. 6611" attracted favorable attention among the members of the U. S. Congress and also among physicians.

BLEECKER VAN WAGENEN.

Bleecker Van Wagenen, business man and philanthropist, died at his country home, Bellows Falls, Vermont, on the 11th of November, 1921, at the age of seventy-four years. Mr. Van Wagenen represented the finest type of American business men. He was equally devoted to his business and to humanitarian interests. For many years he was a member of the firm of Dodd, Mead & Company, publishers, and in later years was its president. He was a member of the Board of Trustees of the Training School at Vineland, New Jersey, and took an active interest in the scientific studies of the Eugenics Record Office. He contributed largely to the support and

publication of studies of the Committee on Sterilization. In 1912 he reported the progress of this committee's investigation to the First International Congress of Eugenics in London. In 1914, Bulletins 10A and 10B of the Eugenics Record Office, which consisted of the report of the Committee's work up to that date, were published. Mr. Van Wagenen gave not only of his means, but also devoted his own time and efforts to eugenical studies. He is the type of man who makes scientific research possible.

WOMEN IN INDUSTRY.

The position of women in industry has a bearing upon differential fecundity and survival of offspring. In Bulletin Number 3 issued by The Women's Bureau of the U. S. Department of Labor, entitled "Standards for the Employment of Women in Industry," short, clean-cut standards of employment conditions are proposed.

HEREDITARY DISEQUILIBRATION.

Before the Toronto meetings of the American Society of Naturalists Dr. C. R. Griffith, University of Illinois, reported that rats, either male or female, forced to live for three months in a cage that rotated rapidly, when released whirled in the opposite direction for several weeks. Some of them eventually showed a "disequilibration," a tumor developed in the inner ear, and the rat died. A male rat thus treated and then mated, outside of the revolving cage, with untreated females, produced offspring a large proportion of which when a few months old showed "disequilibration," otic tumors and premature death. In some way the tendency to form otic tumors (apparently induced by the whirling) had become an "inherited" character.

THE BROKEN HILL SKULL.

An ancient human skull has recently been found in the Broken Hill Mine, about 650 miles north of Bulawayo, South Africa. Sir Arthur Keith writes in the *Illustrated London News*, November 19, 1921, "The Rhodesian fossil skull does not represent a type of man which is new to anthropologists; every feature of this skull proclaims the ancient African of whom it formed part to have been first cousin to Neanderthal man, that peculiar species of humanity which lived in Europe throughout a certain phase of the Ice Age. . . . The revelation now made in northern Rhodesia extends the habitat of this ancient and extinct type of humanity far into Africa. We now seem to be tracing Neanderthal man toward his cradle-land, for in many of its features the Rhodesian skull is more primitive than European specimens of the same type.

"It cannot be said that this discovery of fossil man has taken the anthropological world by surprise. From time to time during the last fifty years numerous travelers and local archæologists have reported the find of Palæolithic stone implements in South Africa, in workmanship not unlike the implements found in the gravel and terrace deposits of Europe. The presence of such flint implements is a sure indication that man is an ancient inhabitant of South Africa."

Dr. A. Smith Woodward concludes that the new Rhodesian man is a later development than Neanderthal man; of more recent geological date. He states that the leg bones found with the skull "are in all respects those of an ordinary modern man." Hence this fossil man doubtless stood perfectly erect. The most striking features of the skull are (1) immense transverse ridges over the eye sockets; (2) an extraordinarily broad palate

with typically human teeth, some of which show decay; (3) the long and massive face; (4) a brain case whose capacity is not far below that of the modern Englishman.

CHAULMOOGRA OIL AND LEPROSY.

Because leprosy is one of the few diseases which is chronic and disastrous enough to be institutionalized by the several states and territories, any progress of medical science in treating this ailment has a bearing upon national eugenics. Recently the new treatment by the ethyl esters of chaulmoogra oil has given rise to optimistic and extravagant claims in regard to the possibility of this remedy in curing leprosy. The United States Public Health Service feels called upon to advise caution. In a recent announcement it says, "the ethyl esters of chaulmoogra oil, the use of which has largely supplanted the oil itself, constitute a most valuable agent in the treatment of leprosy. In treating young persons and those in the early stages of the disease, the improvement has been rapid and striking; in older persons and older cases it is less so. Of the cases paroled from the leprosy stations in the Hawaiian Islands so far about eight per cent. have relapsed and returned for treatment. This was to be expected; and on the whole the results have been so favorable as to make treatment of the disease hopeful. But only time can tell."

In the Public Health Reports for November 11, 1921, the statement is made that the ethyl esters of chaulmoogra oil are superior to the oil itself in that (1) the former may be administered practically to all patients, and (2) their use, when injected subcutaneously, is not accompanied by the pain, discomfort, and other untoward effects attendant on the use of crude chaulmoogra oil.

WAR AND EUGENICS.

(Abstract from *Eugenique*, Nov., 1921.)

Dr. Papillault, in an interesting lecture held at a meeting of the Société Française d'Eugénique, proves through statistical figures obtained during and after the Great War that the laws of eugenics have been confirmed by the events of the terrible crisis.

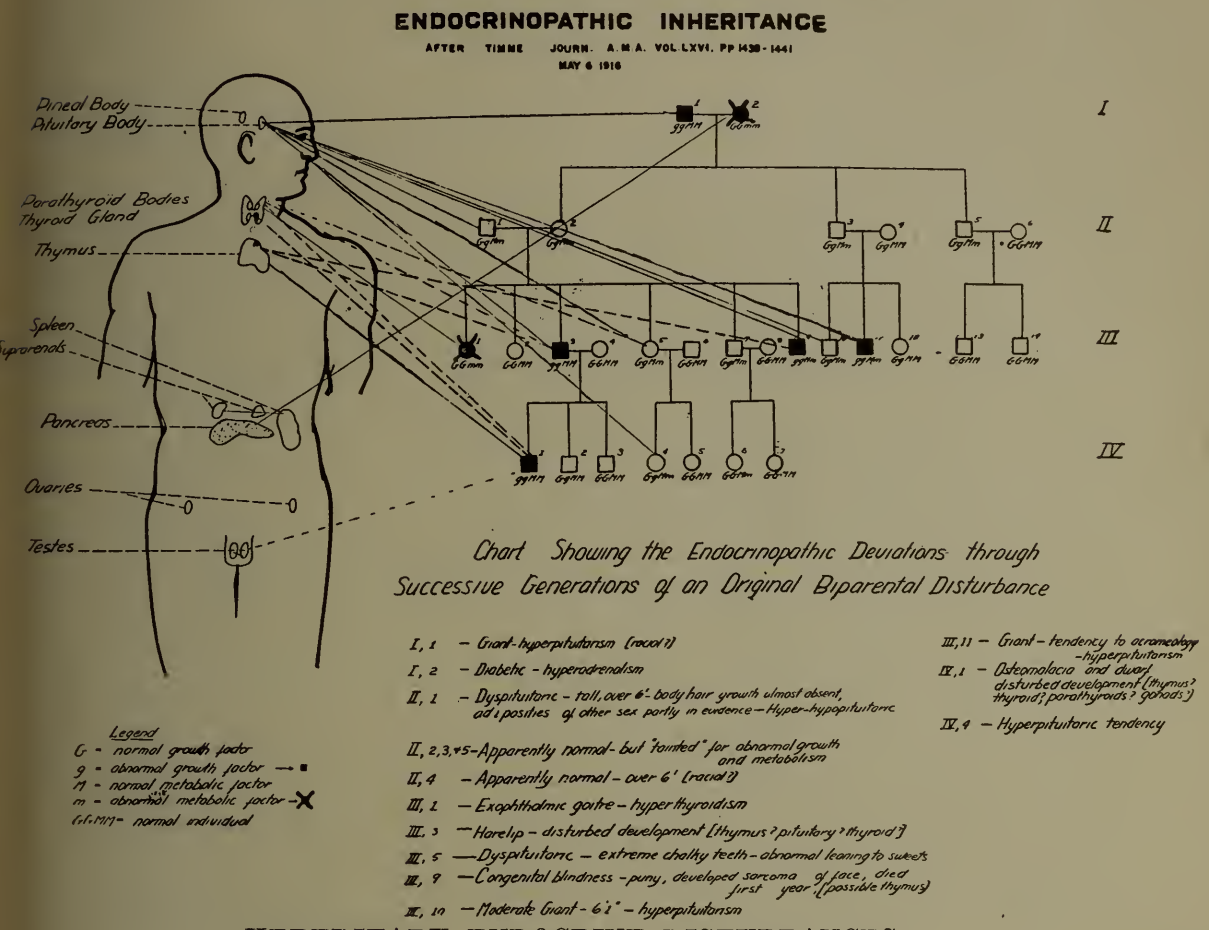
Did not the different races, the Turks, the Armenians, the Russians, the Germans and the English act during the war just as they would have acted thousands of years ago, thereby showing that stable heredity dominates environment and education?

The war, like all exogenous causes, shocks, fatigue, traumatism, infection, etc., acts seriously only on mentalities which are already prepared or unbalanced, defective or weak. War sometimes reveals latent psychopathic troubles, which would have manifested themselves sooner or later.

According to available statistics the number of insane in French hospitals has decreased during the war. Delinquencies among the adolescent have increased, but this was due to the familial conditions. Where the father had to leave the home, the young boy was left in charge of the family, playing the rôle of the man and soon falling an easy prey to temptations.

The number of suicides in France during the war was not abnormal, thus proving that suicide originates from a mental and mostly hereditary defect rather than from a state of despair.

Eugenicists, Dr. Papillault claims, do not pretend to put a halt to social reforms, but try to show that the amount of money spent for the education of the defectives is a loss to society. He advocates that such inadequates, many of whom are a grave menace to society, should be prevented from reproduction.



HEREDITARY ENDOCRINE DISTURBANCES.

This diagram was prepared by the 1921 Training Corps of the Eugenics Record Office and exhibited at the Second International Congress of Eugenics. As indicated, the chart is based upon a pedigree study of endocrinopathic inheritance by Dr. Walter Timme, which appeared in the *Journal of the American Medical Association*, May 6, 1916.

In that portion of the family here described, the original endocrine disturbance involved primarily the pituitary gland in the father and the pancreas in the mother. In subsequent generations there appeared a segregation and recombination of hereditary glandular qualities into various endocrinopathic complexes. The pituitary and thyroid glands appear to have suffered the greatest disturbances, but the thymus and gonads also became involved in the upset within inter-dependent glandular systems.

PERSISTENT THYMUS AND CRIMINALITY.

"Of 192 bodies sent to the anatomical laboratory of the West Virginia University Medical School, 52 came from the insane hospitals, 10 from the tuberculosis sanitarium, 74 from the poorhouses, 20 from the State Penitentiary, and 36 from undertakers. In this number 22 persistent thymuses were found, 20 of which were from the 20 criminals. All were first or second degree murderers, with the exception of one who was a rapist." (Endocr., Nov. 1921, p. 812, abs. of paper by S. J. Morris, which appeared originally in Med. Rec. N. Y., 1921, pp. 438–439.)

MENTALITY OF BLIND PUPILS.

In The Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, 187 pupils were tested in February, 1920. The report which has been recently published states that the authorities believe that this test is fairly representative of the mentality of the student body. It states also that "there is no material difference in the classification whether determined by the judgment of the teachers or by the methods that obtain in the psychological laboratories." The results given are as follows: Intelligence quotient, 110 or above (superior), 21.4 per cent.; 90–110 (average), 38.5 per cent.; 80–90 (dull), 16.6 per cent.; 70–80 (border line), 13.3 per cent.; below 70 (probably feeble-minded), 10.2 per cent. The report further calls attention to the surveys of seven schools made during the year 1919–1920 which found similar distribution of intelligence among the pupils.

THE MORTALITY OF FOREIGN RACE STOCKS.

The Scientific Monthly for January, 1922, publishes Dr. Louis I. Dublin's paper on the above-named subject which was read before the Second International Congress of Eugenics. Dr. Dublin concludes that (1) The several races that make up the foreign-born population of New York are variable as to their natural vigor as measured by their mortality rates or by life tables. (2) With the exception of the Russians, who are, for the most part, Jews, the expectation of life of the foreign is less than for the native born of native parentage. (3) Of the foreign born, Russians have the best expectation followed in order by the Italians, the English, Scotch and Welsh, the Germans, and the Irish. The last have a particularly low expectation. (4) With the exception of the Russians and Italians, the mortality is higher among these races living in New York State than in their native country. (5) This condition may be due to the difficulties of adjustment to new conditions of life; or to the poorer quality of the immigrants as compared with their own people who stay at home, or to a combination of both these factors.

HEREDITY OF ECTODERMAL ABNORMALITIES.

Dr. H. Fischer, of the University Skin Clinic in Köln, describes in the *Dermatologische Zeitschrift* for February, 1921, a family in which for five generations, without skipping, anomalies of skin thickening, nail marking, and hair distribution have been inherited. These and other symptoms of the patient suggest hypothyroidism. Fischer rejects the view that we have here an inherited disfunctioning of the gland, because, he says, if it were such, other changes due to thyroid should appear, such as goiter. Also, the skin thickening is not a hypothyroid phenomenon; yet the skin thickening is obviously genetically connected with the other defects. Rather, he thinks, all are due to germ-plasmic disturbances affecting the ectoderm, and inherited as dominant traits.

It seems possible that two causes may coöperate in this case: namely, a hypothyroidism and hypoplastic tendencies upon which the hypothyroidism leaves a specially profound mark. These hereditary hypoplastic tendencies may be confined to the ectoderm; and the particular form they take may be determined by the inadequate thyroid secretions.

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SOUL OF A POET.

John G. Neihardt was born in Sharpsburg, Illinois, Jan. 8, 1881. He was reared on the Great Plains, and settled at Bancroft, Nebraska. He studied at a normal school, taught a country school and became a reporter on a newspaper. For a time he was literary critic of the Minneapolis Journal, but he soon returned to his rural home, gardened, reared a family and wrote poetry, both lyric and epic, which has placed "him in the very front rank of American poets."

Neihardt has a verbal mental mechanism of unusual quality. Some of his most striking phrases and poetical ideas have come to him in his half sleeping hours. Indeed he comes to depend upon this language mechanism, so that he writes swiftly and easily when it runs easily for him, but often he has to wait for it to function. He indeed personifies this mechanism as his "ghostly brother." In early youth he, for a time, adopted "vers libre", but that was apparently merely an expression of his radical nature, desiring to be distinctive; but his natural expression is rhythm, and in word-pictures, like his "Storm Rune," one sees the lightning and hears the dull thunder.

"In gardens of gloom, walled steep
with doom,
Strange blue buds burst in thunder,
and bloom
Dizzily, vividly, gaudily, lividly—
Death-flowers sown in a cannon-
gloom."

His father wrote verses before him.

Neihardt has a prevailingly melancholic temperament. This determines various elements of his reactions. First, a depth of philosophy in his writings, and second a quest of the stimulus to be derived from summer tramps through the West, and from the normal sex-life. He is evidently something of a recluse and so a semirural community for him has a greater attraction than has the busy, superficial kaleidoscopic city.

"Far from the bitter grin of human faces
"I could sing."

And he shuns too much daylight and sighs: "O Great Kind Night!" But he understands the soul of the Amerindian and is understood of them.

His mental faculties are tuned to a rhythm which became painfully obvious once in his delirium. His poetry drips rhythm:

"The winds of the cosmic struggle
Made of his flesh a flute
To echo the tune of a whirlwind
rune
Unto the million mute."

One hears the periodic gallop of horses in:

"By the might of the Mede, the hate
of the Hun
The bleak northwind of the Goth."

Probably this capacity for rhythm lay back of his early love of machinery.

John Neihardt is somewhat maladjusted. He compares the Missouri to his own soul—"the beating at the bars, the breathless fighting of the half-whipped but never to be conquered spirit, the sobbing of the wind-broken runner, the anger, the madness, the laughter." He feels he is different and emphasizes the fact. And he is different; that is one reason why a world, weary of monotony, likes him.

J. T. House, 1920. John G. Neihardt, Man and Poet. Wayne, Neb. F. H. Jones & Son. 143 pp.

BIRTH RATE IN FRANCE.

The world war dramatized for France the old question of natality; it has become the problem of her very existence; for, as the author says, it is not sufficient to be victor; it is necessary to survive victory. The author reminds the reader that in all her history France has had numbers; she has them no longer. It is to sentiment appeal must be made, first of all, of having children as much as of loving one's country and offering all to it.

The author proceeds to analyze the problem of population; and to consider how peoples die or decline. He traces in ancient Greece and Rome the loss of fecundity, the perversion of the sex instinct to purposes of mere pleasure; growth of cities and of love of luxury, with decline of childhood. With a loss of the racial instincts the race ceases to live. So, today, Paris sterilizes France.

In the problem of natality there has to be considered the problem of the family and how it may be maintained. For the instinct of family life is easily repressed without any great sense of individual loss; though with irreparable loss to the nation. Particularly in France growth of democratic ideals has weakened the family life which is essentially a monarchical institution. The author's program involves moral reconstruction of society, an economic reorganization of the family, an exaltation of the national energy.

G. Rageot; 1918. La Natalité: ses lois economiques et psychologique. Biol. de philosophie scientifique. Paris: Flammarion.

VICE AND HEALTH.

While eugenics is not antivenereal propaganda, yet to believe that venereal disease has certain eugenical bearings it is not necessary to stress the view that on the average those whom syphilis kills and gonorrhoea sterilizes are below the average in social fitness. J. C. Funk, formerly scientific assistant in the U. S. Public Health Service, has written a book on the grave menace of venereal disease. While some of his statistics are open to question, every intelligent man must agree that it is desirable to warn youth of the presence of these contagious diseases, and to make a fight against public prostitution. The author believes that this evil can be minimized by a proper community spirit.

J. C. Funk, 1921. Vice and Health: Problems—Solution. J. B. Lippincott Co. Philadelphia. $1.50.

INTELLIGENCE AND SCHOOL GRADES.

Mr. William F. Book, of Indiana University, has made a preliminary report on a state-wide survey of high-school seniors. In this test, the scales of Dr. and Mrs. Pressy were used. Over 5,700 students (over 2,300 boys and 3,400 girls) were graded. It appears that about as large a proportion of high-grade students of low-grade as of high-grade intelligence go to college. About one fourth of the "brightest" students (A and A +) are not thinking of going to college; while sixty-two per cent. of those grading E had arranged to enter college. On the average, the students who have decided to go to college stand slightly higher in intelligence than those who have not. The "brightest" students had not been selected for special advancement in high or intermediate school. The average boy ranked decidedly higher in the mental tests than the average girl; but the boys did not advance, on the average, as fast as the girls.

WILL-TEMPERAMENT.

Dr. June E. Downey is working out a test of will-temperament corresponding to the Binet test of intelligence. She has prepared an examination blank in four pages and a handbook of directions for making the test. The test consists of (1) speed of decision; (2) freedom from load; *i.e.*, ability to exert oneself to the limit; (3) writing name at retarded speed; (4) choosing between mental tests of alleged different difficulty; (5) coordination of impulses; (6) speed of movement and freedom from load; (7) motor inhibition; (8) flexibility and volitional perseveration; (9) interest in detail; (10) motor impulsion; (11) reaction to contradiction; (12) resistance to opposition; (13) finality of judgment. These brief phrases are elaborated and some of the results shown graphically in Dr. Downey's so-called "Will-Profile"; in which the grades achieved in the various tests are plotted on quadrille paper and connected by a heavy line.

Downey: Individual Will-Temperament Test. Manual of Directions. World Book Company, Yonkers, N. Y. 1921. 23 pp. 20 cents.

PERSONS GAINFULLY OCCUPIED: 1920.

The relative numbers and ages of persons especially classified according to sex has a close relation to racial welfare represented by national fecundity. It is of special interest to note that according to the census of 1920 of the total population, ten years of age and over, 50.3 per cent. were engaged in gainful occupations. Of the males ten years of age and over 78.2 per cent., and of the females of the same age group 21.1 per cent. were thus engaged. Of the females of the same age group Rhode Island finds 32.7 per cent., and Idaho 12 per cent. gainfully employed.

THE MARYLAND MENTAL SURVEY.

The report of the Maryland Mental Hygiene Survey, conducted by Dr. T. H. Harris and participated in by Miss Elizabeth Greene ('13) and Mina A. Sessions ('13), has just been published. A summary of findings is given in the table, which shows the percentage distribution in each institution of each diagnosis.

Diagnosis.	Public schools, white.	Public schools, colored.	Industrial "schools."	Penitentiary, etc.	County almshouses.
Superior.....	10.5	0.1	1.3	.....	.....
Normal.....	60.6	24.0	21.8	14.6	17.8
Dull normal....	11.4	38.2	24.6	28.3	1.6
Borderline def..	3.5	4.6	5.3	10.9	0.6
Mental defect..	2.5	8.9	8.5	11.8	24.2
Character def...	9.1	16.3	19.4	9.2	0.3
Psychopath. person.....	1.5	4.3	10.6	16.9	2.2
Psychneu. and neuros.....	0.3	3.3	7.5	5.3	0.3
Mental disease.	0.3	.....	0.5	2.9	50.0
Epilepsy.....	0.1	0.4	0.3	0.2	1.9
Others.....	0.1	.....	0.2	.....	1.0
Numbers.....	4,163	676	944	1,386	314

Striking results shown in the table are: The marked lower mental grade of colored as compared with white schools; the prevalence of "character defect" in training and industrial schools; the stupidity and the psychopathic personality of the penitentiary inmates; the insane and imbecile in the county almshouses.

HAZEL DELL TWINS.

Within eight years seven sets of twins have been born in Hazel Dell, nine miles northwest of Elwood. The latest arrival of twins is in the home of Mr. and Mrs. William Bragg, who have had fourteen children. Thus does Indiana grow in strength. (Monthly Bulletin, Indiana State Board of Health, October, 1921, p. 116.)

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TRAINING CORPS MEMBERS.

Of the 215 students who have been members of the Training Corps of the Eugenics Record Office, this office has lost contact with the following members, and would highly appreciate it if its colleagues would supply the present addresses of any of these persons:

Enid C. Allen, '14, Elizabeth L. Barris, '13, Catherine W. Beekley, '13, Mary Dranga (Campbell), '10, Gertrude E. Cannon, '10, Mary Clark, '13, Leora G. Field, '12, Anna Wendt (Finlayson), '12, Mary Bell (Folger), '12, Marjorie Fulstow, '14, Nina M. Gage, '12, Mrs. Marie Gardner, '16, Adelaide M. Hart, '15, Dr. Frederick A. Hodge, '13, Gertrude Hodgman, '12, Mary Storer (Kostir), '13, Jay D. B. Lattin, '14, Jane H. Ross, '11, Marion Sweet, '16, Hazel Thorpe, '13, Zaida E. Udell, '12, Paul Wander, '17.

EUGENIST OR EUGENICIST?

With the development of the science of eugenics, two practically interchangeable words have come into use for indicating a person who studies eugenics. These words are "eugenist" and "eugenicist." The present practice, however, seems to be to discard the term "eugenist" in favor of the term "eugenicist." This preference is desirable because it is based upon sound etymological grounds. Literally, the word "eugenist" means one who is well born, while the word "eugenicist" means one who is versed in the science of eugenics. The syllable "-ic" or "-ics" in the latter term means "the science of," which meaning is entirely lacking in the shorter word. From the standpoint of euphony, the shorter word possibly has a small preference in its favor. But this shortness and euphony are clearly overbalanced by the correct etymological content of the longer word. In the official correspondence of the Eugenics Research Association, and in the editorial policy of the EUGENICAL NEWS, therefore, the term "eugenicist" will, in the future, be used to the exclusion of the term "eugenist," to mean a person who is concerned with, or versed in, the science of eugenics.

FIELD STAFF OF THE SCHOOL OF HYGIENE.

The present staff of eugenics field workers connected with the Department of Biometry and Vital Statistics of the School of Hygiene and Public Health, Johns Hopkins University, Baltimore, are as follows: Blanche F. Pooler, Supervisor; Katie C. Lucas, Assistant; Agnes Allen, Deborah Barlow, Mary J. Brehovsky, Margaret P. Frantz, Nellie G. McFrederick, Elizabeth I. Parrish and Rebekah Sugar.

TRAINING CORPS MEMBERS.

Margaret S. Osborn, '20, is engaged in family case work with the Charity Organization Society of Bridgeport. Her address is 206 Park Place, Bridgeport, Conn.

William L. Dealey, '13, is Assistant Director of Educational Work, U. S. Public Health Service. His address is 1341 Taylor Street, N. W., Washington, D. C.

Harry W. Crane, '15, is Associate Professor of Psychology in the University of North Carolina, and is also Psychopathologist of the State Board of Charities and Public Welfare. His address is Box 384, Chapel Hill, N. C.

Amey Eaton Watson, '10, has recently completed a study on Illegitimacy, which will be published by the Federal Children's Bureau. Mrs. Watson is at present a member of the Faculty of the Pennsylvania School for Social Service. Her address is 5 College Avenue, Haverford, Pa.

EUGENICAL PERIODICALS.

The Eugenics Review is published quarterly by the Eugenics Education Society, 11, Lincoln's Inn Fields, London, W. C. 2, England, at ten shillings per annum.

"Eugénique" is the organ of the "Société Française d'Eugénique" published by J. B. Baillière et Fils, Paris, at a yearly subscription price of 12 francs.

"Revue d'Eugénique" is the organ of the "Société Belge d'Eugénique" published four times a year at a subscription price of 10 francs. For subscription apply to the publishing office: 74 Rue de Namur, Brussels.

RUSSIAN EUGENICS BUREAU.

Dr. Jun Philiptschenko, Professor of Experimental Zoology and Genetics at the Petrograd University, writes that a year ago he started a Eugenics Bureau under the auspices of the Russian Academy of Sciences at Petrograd. The Bureau is now receiving family history data from academicians. It has compiled two popular publications discussing some fundamental principles of eugenics and human inheritance.

Professor Philiptschenko regrets that his society is unable to get American literature on genetics, eugenics and human heredity. The poverty of professors in Russia is very great. (Professors' bread cards which they receive in lieu of salary cannot be exchanged to secure books!) He earnestly requests American geneticists and eugenicists to send him their publications, care Mr. Michal Diakonoff, Russian Trade Delegation, Kristiania, Norway.

THE DEATH OF PRESIDENT PERRIER.

The "Société Française d'Eugénique" has sustained a very heavy loss through the death of their president, Mr. Edmond Perrier. Those who contributed towards the building up of the Society have found in Edmond Perrier an ardent and devoted supporter and collaborator. In spite of his numerous activities and duties as member of the Académie de Sciences and the Académie de Médecine as well as numerous societies and commissions, he always attended the conferences of the "Société d'Eugénique," inspiring the audience with his discussions and ideas. (Abstract from "Eugénique," Nov. 1921.)

INTERNATIONAL COMMISSION OF EUGENICS.

Chairman, Major L. Darwin (London), President of the Eugenics Education Society.

Vice-chairman, Prof. Henry Fairfield Osborn, President of the Natural History Museum, New York.

Secretary, Dr. A. P. Govaerts, Secretary of the Belgian Eugenics Society, Brussels.

Representatives of cooperative countries:

A. Societies:

Argentina, Dr. V. Delfino (Buenos Aires).

Belgium, Dr. A. P. Govaerts (Brussels), Société Belge d'Eugénique.

Canada, Dr. J. W. S. McCullough, Public Health Service.

Czechoslovakia, Dr. Ruzicka (Prague). Czechoslovakia Eugenics Society.

Denmark, Prof. S. Hansen (Copenhagen), Consultative Committee on Eugenics.

England, Prof. E. W. MacBride (London), Eugenics Education Society.

France, M. L. March (Paris), Société Française d'Eugénique.

Netherlands, Dr. A. van Herwerden (Utrecht), Society of The Dutch People.

Sweden, Baroness Ebba Palmstierna (Upsala), Consultative Committee of Eugenics.

Norway, Dr. A. J. Mjoën (Windern Laboratories), Consultative Committee of Eugenics.

United States, Dr. H. H. Laughlin (Cold Spring Harbor), Eugenics Research Association.

B. Institutions:

Eugenics Record Office: Dr. C. B. Davenport, Director of the Department of Genetics, Carnegie Institution of Washington.

BELGIAN EUGENICS SOCIETY.

The Belgian Eugenics Society located at "Maisons des Médecins," Palais d'Egmont, Bruxelles, has organized this year a second course of lectures, in the buildings of the University of Brussels. The lecturers are: Prof. Keiffer (A Danger for the Race), Prof. Decroly (Eugenics and Feebleminded Children), Prof. Massart (Genetics). Colonel Lemercier (Eugenics and Large Families), Mr. Wets, Judge of the Juvenile Court (Laws and Eugenics). These lectures are devoted to the spread of eugenical principles among the intellectuals of Belgium.

Eugenical education is the main business of the Eugenics Society of Belgium. The most striking result of this work is the recognition of eugenics by the Belgian Government. Belgian science, and the Belgian people, also, are finding in eugenics a valuable agency for practical race improvement. The lectures will be published *in extenso* in the Revue Belge d'Eugénique.

Persons who are interested in, or who desire to obtain information concerning, the Belgian Eugenics Society are invited to address Dr. A. P. Govaerts, Eugenics Record Office, Cold Spring Harbor, L. I., N. Y.

FOREIGN NOTES.

Dr. George P. Frets, of the Asylum "Maasoord" at Portugal, near Rotterdam, has been appointed a member of the Commission of Heredity of "Het Nederlandische Volk."

A "Gesellschaft für Geschlechtskunde" is founded in Berlin (Beethovenstr 3, Berlin N W 40) to diffuse a scientific knowledge on social questions. One of the subjects of the conferences is eugenics.

"Rassegna di Studi sessuali" is a periodical issued from Rome containing articles on internal societies, education, prostitution, venereal disease and like subjects.

WAR AND MARRIAGE.

(Abstract from *Eugenique*, Nov., 1921.)

Dr. Georges Schreiber, in a paper read before the Société Française d'Eugénique, presents the question: "Is war eugenical or anti-eugenical?" Certain authors have ascribed to war a eugenical value. War, in giving victory to the group composed of the most vigorous, most favorably endowed, and most enterprising individuals, insures the supremacy of those races and favors their development.

Considering the influence of the war upon marriages, comparative statistics show a remarkable increase of marriages immediately after the war in France, in spite of the most unfavorable conditions.

Another consequence of the war is the increase in mixed unions between French and English, Canadians, Australians, Italians, Portuguese or Americans. The offspring from such matings will probably constitute very desirable additions to the French nation.

Considering the diminution of the most valuable male stock following the war, Dr. Schreiber asks whether it would not be rational to regulate marriages with a view of improving the results. Eugenics can work towards this end by enforcing practical measures for preventing the propagation of the inadequates, resorting to voluntary or involuntary sterilization and thus introducing artificial selection instead of natural selection similar to that practised for the amelioration of animal or plant species.

The author discusses certain marriage restricting laws applied in France and other progressive countries, notably America. France has been one of the first countries to propose compulsory medical certificates before marriage.

While eugenical science has not yet arrived at a stage where it can furnish a legal basis for definite marriage restriction, our knowledge supplies valuable indications for parents and couples intending to marry. For members tainted with hereditary diseases or mental defects, the requisition of a medical examination before marriage seems rational.

Thus without using premature or arbitrary measures, eugenics can contribute to the familial, social and racial betterment of humankind.

BODILY DEVELOPMENT.

The data obtained from about 167,000 white and 500 negro children, measured and weighed in the "Children's year" throughout the United States, have been published by the Children's Bureau. The children were of all ages up to 6 years and were mostly weighed without clothing. Tables of average stature and weight for both boys and girls by both the English and metric systems are given month by month from 1 to 72 months.

Some interesting results were that of children under 1 year of age of the same height the older weighs more, slightly, than the younger. This is, probably, because the older they are—up to 11 months—the chubbier they are. The children of Scandinavian parentage had a stature and weight considerably above the average and those of Italian considerably below. Both in stature and weight the averages for children in rural areas are above those for children in urban areas. Since only children of native-born parents are considered it is thought probable that this difference in average is due to environment. But, on the other hand, short races live preferably in cities. Children of the following stocks were studied separately: Italy, Germany and Scandinavia.

SEX INCIDENCE IN ABORTIONS.

Dr. Adolph H. Schultz (Department of Embryology, Carnegie Institution of Washington), in publication No. 275 of the Carnegie Institution of Washington, says:

"In view of the generally accepted supposition that sex is determined either before or at the time of fertilization, one may speak of a sex-ratio at conception or a sex-ratio of fertilized ova. This may also be called an original, physiological, or primary sex-ratio; the sex-ratio of the new-born may be termed secondary and, finally, that of adults is the tertiary sex-ratio. The later term, in contrast to the preceding ones, does not apply to a definite time, such as conception or birth, but may be used collectively to designate the changing numerical proportion of the sexes after they reach maturity."

Briefly to sum up the results of this study, the author believes he has succeeded in correcting two errors frequently found in the literature: First, that the relation of the sexes at conception does not, as frequently stated, show an extremely high preponderance of males, but a surplus of 10 per cent. at most. Second, that a great number of factors claimed to influence the sex-ratio at conception, if playing any rôle at all, are only sex-eliminating during intrauterine life and have no effect upon sex determination.

Further results of interest are the marked fluctuations in the sex-incidence of abortions and still-births in different periods of development and also the great changes in the death-rate during intrauterine life. These facts may serve as a helpful guide in the search for the cause of the greater mortality among male fetuses.

NOTES AND NEWS.

As a result of a very careful study of the capacity for mice to learn a maze, Bagg (Archives of Psychology, No. 43, June, 1920) concludes that there appears to be considerable difference among different strains in this respect.

Professor Roswell H. Johnson of the University of Pittsburgh has given two lectures on eugenics in the required freshman course in the University, and five lectures, in a Forum in Pittsburgh, on "Eugenics and Its Foundations."

Also, Dr. Johnson was instrumental in having passed, both by the American Birth Control League and the Voluntary Parenthood League, resolutions stating that more births are desirable from superiors, and that curtailment is desired only among inferiors. Such resolutions tend to make the purposes of these two societies more nearly eugenical.

THE WORD "PROCREATE."

The editors of Webster's International Dictionary, in response to an inquiry, state that the word "procreate" when used in its broad general sense means "to generate and produce, especially, offspring; not only of the sire but also of the mother, and also, especially, of pairs. There is no reason to suppose that it should be limited to the sire."

They supply the following citations, going back to an early period, which show that its use, referring to other than of the sire, alone, has been quite common.

A pair of animals, producing . . . two hundred offspring, of which . . . only two on an average survive to *procreate* their kind. Darwin (1859).

If that be female which *procreates* in itself; . . . all plants are female. Sir Thomas Browne (1646).

One of the principal ends of marriage is the *procreation* of children. Bouvier Law Dict. (1897).

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EUGENICS IN SOUTH AMERICA.

By Reginald G. Harris.[1]

Ever since the rediscovery of Mendel's laws of inheritance plant and animal breeders have been occupied with conducting experiments on a large number of widely varying types of organisms. These experiments have brought to light the method of inheritance of may unit characters (single traits). In some cases even the location of the factors or genes which influence the development of the unit characters has been graphically pictured. Among many animals, fowl, rats, mice, guineapigs, rabbits, vinegar-flies, etc., as well as among many plants, experiments have been conducted to ascertain the laws governing heredity.

There are many human traits which are governed in their inheritance by laws similar to those which have been discovered among the lower forms of life. Unfortunately these laws may be applied only in their most general sense. The fact that a unit character, vermillion eye in *Drosophila*, for example, is a "recessive allelomorph" of the wild type red eye, does not prove that blue eye in human individuals is the allelomorph of, or is recessive to, brown eye; it merely shows that unit characters may be allelomorphic and that one is dominant over the other. If one wished to know the relationship of various eye colors to each other in other animals than human beings he would carry on breeding experiments, and from observations on the resulting offspring conclude in what way the several unit characters acted upon each other.

But such an experimental procedure in the case of man is obviously impracticable. The eugenicist welcomes in the absence of controlled laboratory experiments natural, more or less controlled, crosses of human races. Such crosses have no doubt been infrequent, though two notable examples are well known. One is the case of the colony of Pitcairn Island, and later of Norfolk Island. In these islands at the present time there are nearly one thousand individuals all descendants of a cross between English men and Tahiti women. The original crosses, in this case, occurred about a century ago. The second experiment occurred when a few Boers and Hottentots intermarried and continued to intermarry for some time without crossing with neighboring tribes. These two examples of human racial crossing are of unique interest to the eugenist because they afford him an opportunity of observing the resultant hybrid offspring uncontaminated with other genetic factors than those originally given by the two parent strains.

Study of eugenics in South America offers the observer a no less fascinating, though no doubt more complex situation, than those presented in the foregoing cases. The observations which I shall present at this time are the result of facts which came to my notice, and impressions which I received during a recent excursion through South America with the Cornell University Entomological Expedition of 1919–1920. For this discussion, then, the term South America will designate those countries which

[1] Mr. Harris is a young biologist who gave last year a course of lectures at Brown University on the Races of South America.

were visited, namely, Brazil, Argentina, Paraguay, Uruguay, Chile, Bolivia, and Peru. In such a large number of nations, and even within the nations themselves, wide differences of race and environment may exist, hence the great danger of hasty generalization, and the need for extreme care in making and interpreting statements concerning the inhabitants of South America either present or past.

The problem of ascertaining the result of the interbreeding of the widely divergent human races in South America can not be solved by a superficial glance at the data which may be drawn from a study of European, Aboriginal, and Negro parent stock, and the resulting offspring. Given the parents and the hybrids, the effect of crossing is not at once apparent, for the parent stocks are widely variable, and the environment furnishes modifying influences the scope of which is only a subject of conjecture. But to say that there is a new people because an unusual crossing of races exists is wholly insufficient. The parent stock and resultant offspring must be carefully studied.

If sterility and the chemistry of blood are true indicators of the limits of a species, man includes but one species. Thus far crosses between even the widest morphologically divergent types have failed to produce sterility in the offspring. In this respect human beings are similar to horses, cattle, dogs, fowl, etc., where there exists a striking variety of form and color within the same species. It is generally believed that crosses between human races of extremely different physical and mental traits produce offspring which are intermediate between the two parent types, that is to say, the hybrids show that blending inheritance has occured.

An indiscriminate crossing of human races is considered unwise, not only on account of possible great psychic differences, but more especially because of the conflict of social inheritance which often results. Every biologist is aware of the snail-like progress of organic evolution. Morphological and other physical changes in existing organisms are infrequent. To the sociologist the importance of social inheritance as a method of rapidly bettering the human race is apparent. The eugenicist, however, is equally interested in the biological inheritance of the individual, for he sees, in encouraging crossing and fecundity among the higher types of human beings, and discouraging mating and the production of numerous offspring in the lower groups, an opportunity for permanent racial advancement. It is natural, then, that the eugenicist should turn with keen interest to South America, where racial crossing has been taking place, practically unchecked, for four centuries.

There are in South America three widely different human races existing side by side: (1) the native peoples, all members of the Indian race; (2) the conquerors and early colonists of the continent, men of the white race from the Iberian peninsula; (3) representatives of the Negro race who were imported by the conquerors and colonists, especially in Brazil, as slaves. That these several races should continue to mingle with each other in none other than social and business relationships would form a sufficient basis for a study of unusual interest to the sociologist. But their juxtaposition has not been limited to social and commercial dealings. There

has been an interchange of the blood of these several races.

The ease and rapidity with which interbreeding has occurred is almost unparalleled. At the outset there existed a relationship between the aborigines and the conquerors quite different from that which occurred in the northern continent. Indians and whites (Latins from Southern Europe) crossed freely during the early periods of conquest and colonization, while later Negroes, Teutonic Europeans, and Asiatics were added to the "melting pot."

Ever since races and struggles have been studied the significant question concerning what the attitude of conquerors to conquered should be has occupied a position of just importance. With the presence of international justice in civilized warfare, defeated nations are no longer butchered or enslaved. But whenever cultured peoples contend with uncultured, and white races overcome races with red or black pigmented skins, then the question of the treatment of the conquered arises. The conquerors will in such cases be comparatively unchecked by the laws and customs which influence civilized peoples during periods of post-conquest reorganization.

In the Americas the problem arose early. Should the defeated aborigines be slaughtered or spared, slave or free? In the northern continent the native races were driven continually inland by the invading Caucasians. Finally, when the newcomers had conquered for themselves nearly the whole continent, north of Mexico, they adopted the unusual procedure of gathering the aborigines together and placing them in reservations rather than exterminating or enslaving them.

South of the United States, almost without exception,[1] a different response was called forth. More decidedly is this true among the plateaus of the west coast, where today Indians of pure extraction are grouped by no such artificial means as reservations, but rather live in certain localities because their forebears lived there, and they themselves have never been exterminated or expelled.

Whence came the native races of South America? There are unmistakably present in many of the western plateau Indians some of the "earmarks" of the Mongolian type. In fact so strikingly similar are some of the Indians to Mongolians that I have, upon several occasions, found myself unable to decide whether an individual under observation was a pure Indian or a hybrid resulting from the crossing of Indian with the Oriental stock which now occurs to a limited extent on the west coast. Not only do the native races of South America show similarities in physical appearance to exotic races, but some of their customs and beliefs, exemplified by placing silver in the mouth of the dead, mummification, the belief in a flood, etc., resemble those of the early peoples of the old world. These similarities, however, do not necessarily denote a common origin with these old races, but quite as logically point to exotic influence which might have entered by the Northwestern Asiatic-Bering Sea route, or by the northeast Atlantic route. From archeological data it may be safely concluded that whether or not the early peoples of the old and the new world experienced an interchange of ideas, they surely exhibit a partial parallelism of development. The evi-

[1] In southern and southwestern Brazil, notably in the state of Matto Grosso, many Indians are at present gathered in reservations similar to those occurring in the United States.

dence of heredity (physical resemblance), however, seems to force the conclusion that contact between the peoples of the old and new worlds has existed at some time. Dr. Davenport, in referring to observations which I sent to him concerning the appearance of the Mongolian type among the Indians, writes, "The resemblance of many Indians, especially of certain tribes, to Mongolians is certainly interesting and important. It, of course, does not follow that the Indians are Mongolians, but that they have been mixed with Mongolians, either in coming to America by the Northern Asiatic route, or else by subsequent admixture with Oriental blood across the Pacific."

Among the aborigines of South America there are various types which may be confined to typicial geographical areas: those living on high plateaus, typified by the inhabitants of the Andes, and those of the lowlands, typified by the Indians of Eastern Peru, Brazil and Guyana. Both classes of Indians may be characterized as individuals with the following easily distinguishable physical features: thick black straight hair, thin beards, high cheek bones, small eyes, and short chins. Of the two groups the plateau dwellers were more civilized, and engaged for the most part in agricultural pursuits. Their food consisted largely of vegetables. On the other hand the inhabitants of the arid and tropical lowlands were gathered in wild and nomadic tribes. They lived largely by the chase, wandering about to a certain extent in quest of their food, which had a high meat content. Among this wilder type of aborigines natural selection was still being actively carried on by the agencies of strife between species, and a continual struggle against the climate, food conditions, etc. Among the plateau dwellers, however, intra-species strife had been greatly reduced. The Incas had already established a large and powerful empire in which wandering aggressive tribes were absent (although to be sure a civil dynastic strife was in progress at the time of the arrival of the conquistadores). They had successfully carried on a warfare against the ravages of nature until at the close of the fifteenth century their subsistence was assured in the crops which they produced. The plateau Indians were in an environmental position suitable for making original contributions to the social inheritance of mankind.

A consideration of the characteristics and the social inheritance of the aborigines should demonstrate whether or not the aborigines were capable of responding to opportunity with accomplishment. Granted a stability of social, political, and environmental conditions, had the Indians made any original contributions to the social inheritance of mankind before the coming of the Spaniards?

The Plateau Indians whom the conquistadores found upon their entrance to Peru were the promoters of an ancient civilization. In the Inca empire the foremost tribes, the Quichuas and Aymarás, were far advanced in the knowledge of agriculture. They were familiar with the use of fish and guano as fertilizer. They had transformed steep Andean slopes into cultivable terraces, insuring the productivity of the same by turning aside mountain torrents into carefully constructed irrigation ditches. In architecture this people had also achieved amazing results. Ignorant of the arch and the use of mortar, they had nevertheless constructed huge fortifications, palaces, and temples. Stones of enormous

size were fitted together with extreme care so that no space would exist between the adjacent stones. A well-known striking example of such masonry is found in the twelve-cornered stone. This has, as its name implies, twelve right-angle corners. Each corner fits into the neighboring stones like the lost zig-zagged piece of a picture puzzle. But their achievements were far inferior to those of the Greeks and Romans. The development of decorative art among the Incas was not high. The walls which remain are seldom decorated; and the temple of the Sun itself must have depended upon the gold and silver hangings of the walls for the splendor which it possessed. In the University of San Marcos, incidentally the oldest university in the new world, at Lima, there is a newly organized museum containing extremely interesting Inca relics. Pottery displaying extraordinary coloring, but inferior figures (another example of the inferiority of the Incas in art) is common. Crude metal images, shawl-pins, hammers, primitive mining implements, cloth, etc., furnish evidence of the degree of civilization which had been attained. Numerous mummified figures in a sitting posture, elbows resting on the knees, and the chin in the palms of the hands, supply evidence that the physical appearance of the Inca peoples was similar to that of the Plateau Indians of to-day.

During Inca rule the Indians had lived under a union of civil and religious authority for several centuries. The Inca was a duality in the opinion of his subjects. He was at the same time god and man. He was supposed to be a direct descendant of the Sun; and in him was vested the highest authority of the church and of the state. To commit a civil offence was to commit, at the same time, a sin against the religious order. Consequently the aborigines had early learned the necessity of unquestioning obedience to the voice of authority. Initiative was broken, and independence of thought and action was unknown among the masses. Such was the nature of the social inheritance of the Indians who were, in reality, the representatives of the highest native civilization when the Spaniards came to the continent. Compared with other Indians they had achieved a high degree of civilization. But in comparison with the social heritage of the whites, transmitted and accumulated by Egyptians, Hebrews, Greeks, and Romans, the social inheritance of the Indians was far less in quantity and inferior in quality. In spite of the fact that the Incas had a comparatively favorable environment for the expression of the possibilities within their germinal complex they made no great contributions to civilization. The conclusion is natural that the germinal complex was lacking in the necessary possibilities. Even the highest types of Indians were inferior to the whites.

In Chile the Araucanians or Mapocho Indians were a fairly civilized people, endowed with extraordinary courage and bravery which enabled them to be the only aborigines upon the continent against whom, for a long time, the conquistadores waged unsuccessful war. Their government was a military aristocracy. Their residences were better than those of many savages in that even houses were not unknown. They engaged to some extent in agriculture.

Southern Chile and Southern Argentina was the land of the Patagonian Indians, but they interest us scarcely at all in this discussion, since they have not introduced their

blood into the race mixture of the continent.

The Indians of Brazil are of two general types, those fairly civilized and living on government reservations, and many tribes of Indians still in a comparatively or very wild state, inhabiting the jungle growth bordering upon the huge Amazons system.

The aborigines of Argentina are few in number, and are confined for the most part to a few tribes still existing in the great Chaco. A few Plateau Indians are present in the highlands of northern Argentina but they properly belong with their tribesmen and neighbors of Bolivia, and will be considered with them.

Uruguay presents an even smaller Indian population, in fact small enough to be almost negligible. Consequently, in this study of the effect of racial interbreeding among the peoples of South America we shall look for a partial control of our data to Argentina and Uruguay, for in these nations there are the best existing opportunities of observing what might have been the type of South American colonists' descendants if the Caucasian pioneers and their offspring had not mixed their blood with that of the Indians and Negroes. In other words, we may observe in these two countries the effect of environment alone upon the European colonists. The control, however, is by no means perfect. Environmental differences exist between these "control" and other states. Furthermore, subsequent immigration has been decidedly more active here than on the west coast of the continent. Still, a comparison of Argentina and Uruguay, as they exist to-day, with countries where almost unchecked crossing has occurred should aid and clarify our speculations.

The conclusion, already reached by a study of the achievements of the Indians when acting upon their own initiative and resources, that the aborigines were inferior to the white conquerors and colonists is further substantiated by a consideration of the results of the juxtaposition of Caucasians and Indians: the environmental effect of each race upon the other, and the results of racial competition and natural selection.

Surely one cannot fail to marvel as he observes the slow-moving spiritless Quichua, and the disconsolate sullen Aymará, that these are the descendants of the most civilized peoples of the southern new world: a people whose empire was so vast at the time of the coming of the Spaniards that fifty days were required to traverse it. Both tribes possess the well-known stolidity and impassiveness characteristic of American aborigines. Silently suspicious of the conqueror they toil on without initiative, apparently unmindful of their wretched condition, and equally undesirous of bettering it. Lacking ambition they remain content to till small plots of land, tend flocks, labor in the fields of the conquering white, or in his mines, provided only that they may chew the indispensable coca leaf, or enliven their festivities with deadly alcohol. Very little can be said concerning the effect of chewing coca leaves. Apparently it diminishes hunger and aids the Indians in working for some time on a minimum food supply. It is also possible that its habitual usage fosters mental apathy and dullness. The use of alcohol among the natives is decidedly and unquestionably harmful. It is doubtful, however, if the ravages of old world diseases, alcohol, or the evil effects of coca, can justly be blamed for the lack of initiative, for the phenomenal acquiescence in the rule of an exotic

people, present among the Indians. It is probable that the Indians, accustomed to a union of civil and religious authority in the person of the Inca, a supposed descendant of the Sun, whom they worshipped, had already acquired a deep-seated dependence upon the paternal ruler before the arrival of the Spaniards. Everybody knows the high esteem and reverence in which the Inca was held by his people. When the god and ruler was overthrown his subjects knew not where to turn for a new leader. Overwhelmed they retrogressed to even greater incompetency. If one were not aware of these facts he would be amazed to find, and unable to explain, the presence of a population in La Paz, Bolivia, seventy-five per cent. of which is composed of Indians entirely subservient politically to the few whites who are the rulers of the country. The situation is made more clear by contemplation of the atrocities committed by the conquistadores, who simultaneously destroyed dynasty, religion, and empire. Horror was permanently lodged in the hearts of the Andean aborigines when in 1571 Tupac Amaru, one of the last of the Incas, was falsely accused of rebellion by the Viceroy Toledo, seized, and decapitated in the plaza at Cuzco in the presence of a large crowd of Indians. It is said that such a wail of horror arose as the executioner lifted his sword that ecclesiasts rushed to the Viceroy petitioning him to spare the Inca's life. That night at midnight a Spanish observer recounts having seen a large gathering of Indians kneeling in reverence before the head of Tupac Amaru which had been placed on a pike beside the gallows. In 1781, more than two centuries later, the Indians gathered around the standard of Jose Gabriel Condorcanqui, a remote descendant of the Incas. He had been incited to revolt by the failure of the Spanish government to respond to his complaints concerning the harsh treatment meted out to the Indians at the hands of the Spanish land and mine owners. He took upon himself the name of Tupac Amaru. His followers, ill-armed and broken-spirited, were soon repulsed with fearful slaughter, while he himself was tortured and killed. Such was the reward for natives who showed dissatisfaction with their condition, and desire for social and political reform. After he had been forced to witness the death of his wife, son-in-law, and uncle, their tongues previously having been extracted in his presence, his own tongue was cut out, and he was torn to pieces by four horses attached to each of his limbs. In the contemplation of such atrocities one is not surprised that the spirit of this people, already docile and submissive, was completely broken. Moreover, the Indians found no inspiration in the Christian religion. They had already come to associate the ecclesiastics with many deeds of violence, and now they found many of the priests immoral and greedy. The Church itself in its festivals afforded an extended opportunity for the excessive use of alcohol. It is significant that the native, overwhelmed with the invader's disease and alcohol, horror-stricken and broken-spirited by his atrocities, submitted to be his ignorant inferior servant. The conclusion is natural that the Indians, who were superior in numbers to the whites, would not have submitted to the foregoing atrocities had they not been greatly inferior to the Caucasians in many of those qualities which are usually linked with high racial development and civilization.

But the foregoing reaction applies only to the aborigines inhabiting the Andean plateaus at the time of the arrival of the whites. To the south the Araucanians of Chile had always been fierce fighters, and now they resisted Spanish aggression to the utmost. It was many years before the conquistadores finally conquered this people, and then even though the aborigines would work in the invaders' mines and fields, they never became as dispirited as did the Indians of Peru and Bolivia.

The Indians of Patagonia were little molested and never conquered.

The natives of Brazil and the Argentine Chaco present a reaction far different from that of the plateau dwellers. Here the Indians had been grouped in small tribes free from regular submissive toil and Inca-like authority. They had no desire to work for anybody, much less the newly arrived colonists. Consequently they kept out of the reach of the white settlers. Early in the colonial history of the nation the Indians were driven inland by the advance of the whites. The aborigines continued their flight until they reached the safety of the thick jungle and virgin forest. In this environment they were allowed to remain in savagery. The results are obvious. There are in Brazil, at the present time, Indians quite untouched by European civilization. In fact, save for the Indians of Southern Brazil, who are now collected in reservations much the same as those in the United States, nearly all the aborigines of Brazil are savages. Being of a temperament unadaptable to servile labor, the Indians of Brazil did not supply the need for agricultural workers as did the Andean Indians. Consequently, Negro slaves were imported into the country in such large numbers, that early the resident Negroes for outnumbered the whites. The lowland Indians excelled in spirit and vigor, while those of the plateaus were far superior in social inheritance and civilization, and more easily assimilated in the mixed population. It is conceivable that the uncivilized lowland Indians might well have presented superior qualities for racial interbreeding than the more highly civilized, though less energetic, descendants of the Inca peoples.

In view of the foregoing evidence: the achievements of the Indians before the coming of the conquerors, and the failure of the aborigines to respond spiritedly to the racial competition existing after the arrival of the whites, one is forced to conclude that the Indians of South America were inferior to the representatives of the Caucasian race who conquered them.

Who were the Caucasians who conquered and colonized South America? The Portuguese and Spaniards stand out as having exerted the greatest and most permanent exotic influence upon the continent. One is naturally keenly interested in learning the impelling motive of their vigorous exploration, conquest, and colonization, and in familiarizing himself with the social and biological heritage which was theirs at the time of the discovery of the new world. In his History of Latin America, Mr. Sweet says that, " The people of the Iberian peninsula are the product of the mixing of races. In fact, they are the most mixed race in Europe. Into the Spanish peninsula has come wave after wave of conquest, one set of conquests sweeping down from the north and west, while another has come up from Africa and the East. They are the most Oriental of all European peoples, made so by free mix-

ing of the blood of the Jews and the Moors with that of the Spanish race, especially during the early mediæval period. Thus we must not think of the Spaniard or Portuguese as we would think of the Frenchman or Englishman, as being pure Europeans, with purely European traits, but we must think of them as at least partly Oriental."[2] Mr. Sweet further notes that after many of the Jews, a larger factor in the peninsular population, had professed conversion they obtained positions of power and influence both in civil and religious life, and on account of their wealth they were sought out by many of the Spaniards and Portuguese in marriage, with the result that at the beginning of the sixteenth century many of the great Spanish families had some Jewish blood and traits. Not only had the national blood of Spain become mixed with Oriental blood as a result of the many conquests which had been waged against her, but her greatest institution, the established church, had been overthrown. At the close of the fifteenth century when Columbus set sail for India, Spain stands freed from foreign control, possessing a narrow national mind, and a religious intolerance surpassing that of any other European nation. In consequence of this intolerance the Jews and Moors who had been established for six centuries in the commerce, agriculture, and industries of the peninsula were expelled, and Spain was left incompetent to carry on a successful national home enterprise. The populace had supreme interest in but two expressions of human effort, war and religion. To them commerce, agriculture, trades, arts, held little or no appeal. The motherland was in a deplorable state. It is not strange that in this adventurous nation there should have been many brave men eager to undertake the exploration, conquest, and conversion of a new world. When to all this natural incentive is added the rumor of great wealth to be gained in the Western world the overwhelming appeal which came to Spaniards of this period is evident.

Of what types were the men who first responded to the call of the new world? Perhaps there exist no better examples of the conquistadores than the three partners, Francisco Pizarro, Diego de Almagro, and Fernando Luque, who set out to conquer Peru. Francisco Pizarro was a bold, daring, unscrupulous adventurer, a bastard who had spent his early years as a swineherd. During the conquest he appears as a leader of unsurpassable daring, remarkable bravery, yet at times displaying an astounding treachery. The capture of the Inca Atahualpa, the massacre of his followers, and the murder of Atahualpa himself, show Pizarro as a man devoid of scruple. Still, if one can believe the account of Garcilaso de la Vega, he at times displayed characters which merit highest praise. Vega recounts that during Pizarro's early attempt to conquer Peru he and his followers became stranded upon the island of Gallo. After severe suffering his party sighted a ship sent by the Governor of Panama to take the men in safety back to the isthmus. Upon this occasion Pizarro, having drawn a line in the sand with his sword, is reported to have said, "Gentlemen! This line signifies labor, hunger, thirst, fatigue, wounds, sickness, and every other kind of danger that must be encountered in this conquest until life is ended. Let those who have the courage to meet and overcome the dangers of this heroic achievement cross the line, in token of their resolution, and as a

[2] History of Latin America, by Wm. Warren Sweet. 1919.

testimony that they will be my faithful companions. And let those who feel unworthy return to Panama, for I do not wish to put force on any man. I trust in God that, for his greater honor and glory, his Eternal Majesty will help those who remain with me, though they be but few, and that we shall not miss those who forsake us.[3] Sixteen crossed the line." It seems probable, moreover, that dauntless courage was characteristic of the Pizarro family, for Francisco's brothers Fernando, Juan, and Gonzalo all became leaders in the conquest, the latter having been in charge of the daring expedition which carried on exploration east of the Andes. Of the other leaders Almagro was a foundling, parentage unknown, and Luque was a well educated Dominican, a teacher in the school at Panama. From these and other representatives of the conquest period we arrive at the generalization that the Spaniards who entered South America as conquistadores were men of great bravery, and audacity, actuated in their undertakings by bigoted religious passion, greed for wealth, and a keen relish of adventure. No doubt it was their avariciousness which drove them to unprincipled acts of violence, their general dislike of manual labor which made opportunities for idleness and excess unusually appealing, while the fact that the early Spanish conquerors countenanced and participated in plural marriages and unlimited racial interbreeding is of the utmost importance to eugenics.

The Portuguese who confined their activities to the East coast of the continent were apparently of a different type from the conquistadores, and were no doubt actuated by other motives. They were more clearly colonists than were the Spaniards, and in most cases they brought their wives with them, approaching the new land as a new home. In the United States there are Portuguese of a similar type, farm laborers, and general laborers, reliable, steady, and efficient.

The surprising fact that the ambition and initiative of the Indians was not stimulated by contact with the whites, but rather was deadened, has already been noted. One expects that the whites received no lasting benefit from contact with the Indians. In fact, the Caucasian race, in South America, has apparently deteriorated by mingling with the inferior native races. If for the moment one disregards the resultant offspring, and considers the Indians merely as factors in the environment, he may observe the truth of this promise easily. The new world, especially the western coast, with Indians who did not revolt against servile labor, and native women who served as mistresses, offered to the conquerors an apparently irresistible opportunity for idleness, indolence, and intemperate indulgences. The early conquistadores, themselves, had little more than conquered the chief cities of the Inca empire, and stripped the temples and palaces of gold, when they established themselves in a life of inactive excess. Francisco Pizarro, for example, though active in affairs of the country, and occupied in building the city of Lima, was a participant, in his palace at Lima, of a life of luxury, inebriety, and vice. Nor did the intemperance of colonial life disappear as time went on. Even to-day, Spanish social, moral, and intellectual life is not stimulated by contact with the Indians. Artists, men of literary talent, scientists, reformers, are very

[3] Sir C. Markham's account of Vega's statement.

few even among the "gente." In "South of Panama," an excellent discussion of South American sociological conditions, Prof. E. A. Ross declares that "mental fuzziness is due not to a race weakness or climate but to over-early access to females of a low caste." Undoubtedly the deplorable immorality of the people is a vital factor in the mental incompetency of the race. But is it not possible, and in fact probable, that the excessive sexual immorality that continued to exist even after the colonists were provided with wives of their own race; is it not probable that this excess is due to an inheritable tendency resulting from the crossing of races widely separated in their ideals and social inheritance?

The fact, however, remains that both Indians and whites have failed to benefit by juxtaposition. The Indians have retrenched themselves in apathy as a response to the cruel haughtiness of the early arriving Spaniards, and the Spaniards have retrogressed as the natural result of too close contact with inferior peoples.

The Negro race is confined in its South American distribution almost wholly to Brazil, where it is represented by a large number of individuals. The types of Negroes present in Brazil, their method of entrance as slaves imported from Africa, and their subsequent emancipation on the 13th of May, 1888, are all similar to the history of the Negro race in our own country.

Everyone knows the biological and social inheritance of the Negro. But there has been keen discussion concerning the value of the "color line" which exists in the Southern United States and elsewhere. Is the "color line" merely an expression of prejudice, or does it have its origin in racial differences of biological and social heritage with which the social mind of the whites has become consciously or unconsciously acquainted? There is no biological reason why the color distinction per se should exist. Several of the European nations accept the visiting Negro on the basis of equality. On the other hand, wherever the black race is considered inferior by the white race the attitude has developed from close association. The question of the inferiority of the Negro has been discussed at some length, but perhaps the comparisons advanced by Popenoe and Johnson are as interesting as any for the present discussion. "No matter how much one may admire some of the Negro's individual traits, one must admit that his development of group traits is primitive, and suggests a mental development which is also primitive.

"If the number of original contributions which it has made to the world's civilization is any fair criterion of the relative value of a race, then the Negro race must be placed very near zero on the scale.

"The following historical considerations suggest that in comparison with some other races the Negro race is germinally lacking in the higher developments of intelligence:

"1. That the Negro race in Africa has never, by its own initiative, risen much above barbarism, although it has never been exposed to a considerable range of environments and has had abundant time in which to bring to expression any inherited traits it may possess.

"2. That when transplanted to a new environment—say Haiti—and left to its own resources, the Negro race has shown the same inability to rise; it has there, indeed, lost most of what it had acquired from the superior civilization of the French.

"3. That when placed side by side with the white race, the Negro race again fails to come up to their standard, or indeed to come anywhere near it. It is often alleged that this third test is an unfair one; that the social heritage of slavery must be eliminated before the Negro can be expected to show his true worth. But contrast his career in and after slavery with that of the Mamelukes of Egypt, who were slaves, but slaves of good stock. They quickly rose to be the real rulers of the country. Again, compare the record of the Greek slaves in the Roman republic and empire or that of the Jews under Islam. Without pushing these analogies too far, is not one forced to conclude that the Negro lacks in his germ-plasm excellence of some qualities which the white races possess, and which are essential for success in competition with the civilization of the white races of the present day?

"If so, it must be admitted not only that the Negro is different from the white, but that he is in the large eugenically inferior to the white."

Many mental tests have been given to the Negroes and whites who are attending school in the same locality with results which show the Negroes to be inferior to the whites. Defenders of Negro intelligence state that the differences are due to environment rather than to heritage. The most satisfactory settlement of this discussion may be found, I believe, in a careful study of the Negroes of Liberia, a state founded with free Negroes, a state in which the Negroes have been allowed full and free expression of their inheritance, in a natural climate, where advice of the whites has been available but their blood has been withheld. Surely here, if anywhere, at the present time one should be able to observe the Negro's possibilities, unhampered by slavery or race oppression.

The side-by-side existence of Indian, white, and Negro races, of course, is not confined to the South American continent. But the striking uniqueness of South America is recognized when one contrasts the effects of juxtaposition of whites and Negroes in the Southern United States, and of Indians and whites in the southwestern states with similar circumstances in South America. What was the eflect upon each race of contact with the other races? Who were the survivors of the natural selection which here existed? What was the attitude of each race toward the other?

Four characteristics of the conquistadores offer one a basis for anticipating and understanding the policy which the Spaniards would extend to the Indians: (1) the Spaniards were greedy for an immediate acquirement of wealth, (2) an abhorrence of manual labor dominated them, (3) religious zeal compelled them to exact ecclesiastical as well as political obedience, (4) their contact with Orientals had made them tolerant of race crossing and polygamy.

Now to race-crossing in general, everyone knows that there are several barriers. In North America, where many of the hindrances are preserved, there exist geographical, linguistic, social, religious, and racial barriers. In the United States Negroes and Caucasians do not cross freely not because of geographical, linguistic, or religious barriers, all of which have been removed, but because of racial and social distinctions and prejudices. Much the same may be said concerning the relationships between the Indians and whites of the

United States. There is in Brazil, however, among the lower classes an unhindered intermarriage of white and colored races; while even in the middle and upper classes dark skin pigment is by no means an impregnable barrier to marriage. In fact Brazilians boast that they will eliminate black blood from their country, not by checking intermarriage between the races, but rather by fostering crossing until the black or Negro blood has become diluted to such an extent that it is no longer apparent. This experiment alone makes South America a continent of extreme interest to the eugenist. Furthermore, on the western coast, where Indians are far more numerous than Caucasians, notably in Peru and Bolivia, there is a similar absence of race prejudice. An individual is not considered inferior in South America merely because he has Negro or Indian blood in his veins. The racial barrier to interbreeding is down.

A glance at the racial content of the population of South America serves to convince one that if a race question were advanced it would be very large and serious. Since the question does not exist, since Indians and Negroes are not considered races "below" the white race, the actual outcome and extent of race-crossing is of the greatest significance and importance. The following figures are estimates, as census-taking is difficult if not impossible in many countries at the present time.

Whites	14–15,000,000
Indians	8– 9,000,000
Negroes	3,000,000
Mestizos[4]	13,000,000
Mulattoes	6,000,000

To these may be added some 300,000 Zambos, hybrids resulting from crosses of Negroes and Indians; about 100,000 East Indian coolies, and some other Orientals from China and Japan, at present small in number.

Even more overwhelming are the statistics of aboriginal survival and race-crossing if the controls, Argentina and Uruguay, which supply over half of the total white population, are disregarded for the moment. The former nation with an Indian population of only 50,000 is more purely Caucasian than the United States, while the latter nation is without Indian constituency. Peru, for example, has a population of 4,000,000 people, half of whom are Indians, 1,500,000 are Mestizos, and but 500,000 are white or approximately white. Bolivia presents similar statistics, a population of 2,000,000 only 13 per cent. of which are white. Paraguay, near Brazil, is composed almost wholly of Indians, while Brazil presents not only aboriginal inhabitants to the extent of some 2,000,000, many of whom are still savages; and the resulting hybrids with whites, but even a larger percentage of imported Negroes and nearly 6,000,000 mulattoes.

The explanations of the lack among the South American Caucasians of the prejudice against peoples with more darkly pigmented skin than their own, a prejudice which exists among many Teutonic Protestants, are several. It is probable that there are no deep-lying national prejudices against colored skin among the Portuguese and Spanish. On the other hand, the religious barrier against interbreeding is certainly much stronger among the Latins than among the Teutons. When, however, the religious hindrance is removed, when Indian and Negro become confirmed in the Catholic faith, then they are of one body with the Cau-

[4] Mestizos are hybrids resulting from crosses of Indians and whites.

casian Catholics. If an Indian or Negro becomes a priest, a circumstance which actually occurs, then he is raised above the Caucasian layman and, concurrently with his advancement, his whole race advances.

Explanations such as the preceding may account for the breaking down of the racial barrier between the Caucasian and the Negro. The possible causes for the breaking down of that barrier against the Indian are more numerous. The Indians are not so dark as the Negroes. The Indians have never been slaves. The early conquistadores accepted Indian women as mistresses, and designated the resulting hybrid offspring as their heirs. Racial interbreeding has taken place since the earliest arrival of the Spaniards, who having but recently freed themselves from Moorish domination were still under its influence, and countenanced plural marriages. The environment of America seems to have increased rather than diminished the number of wives. In Chile, for example, where white women were infrequent, soldiers were permanently attended by four to six native women. The long bitter wars with the Araucanians killed many native men, so that Indian women were found universally in the Spanish garrisons in a ratio of four women to one man. It is said that in 1500, in a garrison of but 160 men there were 60 illegitimate children born in a single week. A conquistador, Aguirre by name, was mourned by fifty illegitimate sons, to say nothing of daughters, at his death. In fact the masses of the Chilean population of to-day are the descendants of the Mestizos of the early Spanish Araucaian hybrid class.

Nor does Chile offer a unique situation in this respect. In nearly all the South American countries, save Argentina and Uruguay, there are more or less similar circumstances.

The North American observer is surprised to find that the hybrids are classed not as Indians but as whites. This is especially true of the second generation hybrids. In other words, quite opposite to Teutonic American standards, an individual in South America who has over half Caucasian blood in his veins is Caucasian, whereas in the United States any individual who bears colored blood is colored. This latter view is, of course, quite in keeping with the laws of inheritance and atavism, viz., that in a pure recessive white only white is carried, whereas in hybrid crosses not only white but black may result, with chances in favor of the latter.

The racial attitude of the early conquerors has been preserved. Almagro, when approaching his death, desired that his hybrid son by a woman of Panama should be a Spaniard and his heir; and he was, at first, so received by Pizarro. Likewise, Irala, one of the early Governors of Asuncion, having married seven daughters of a native chief, requested in his will that his offspring be considered Spaniards.

Although there is no racial barrier to interbreeding in South America, there exists a distinction between the races. The attitude of one race toward another, more especially the attitude of Caucasians toward other races, takes a form of superiority not because the other race is considered inferior in blood per se. A halfbreed is not in any way despised by either parent race because he is a hybrid. Whatever distinction or barrier does exist in the mind of the Spaniard is purely social, and ceases to exist as soon as the Indian or Negro has acquired the wealth, or achieved the accomplishments, necessary to allow entrance

to a higher social class. Comparatively few marriages occur between pure Indians and Spaniards at the present time, because the Indians are so universally free from ambition that they do not attempt to place themselves in the upper classes.

Added to the social distinction is the barrier of language, for even among those Indians who are frequently in contact with Spanish-speaking peoples, not over twenty per cent speak Spanish. They have become veritably a nation within a nation. Useful members of a state when soldiers are needed, they are uninterested in the citizenship which is theirs or the privileges which it should bring.

But social and linguistic barriers are not absolute, nor have they always obtained. The early widespread extent of racial crossing has already been noted. To be sure crosses between the Spaniards and pure blooded Indians are less numerous than formerly, but they still exist. Moreover, the large Cholo factor of the population offers unlimited opportunity for wide racial crossing, free from linguistic barriers, in the form of back crosses to both parent stocks.

Since racial crossing has occurred freely in the past and is still present to an unusual extent in South America, it is natural to inquire into the type of offspring produced by the crosses. The parent types have already been studied. It has been noted that the white race is eugenically superior to either the Indian or Negro races. It has been seen that both parent races of the western coast population of South America, i.e., whites and Indians, have retrogressed, rather than progressed, as a result of their close contact one with the other. They have added little or nothing to the social heritage of the world.

What of the hybrid offspring resulting from the mixing of these widely divergent races? What is the effect of such extensive and almost unchecked racial crossing? Is it beneficial to the species man? Are the Mestizos equal with or superior to the whites, equal with or inferior to the Indians, or do they fall somewhere between the two parent stocks? Similarly what is the comparative status of Mulattoes, Negroes, and whites?

One enters such a discussion well supplied with generalizations which have been reached by observing the effect of wide racial crosses already studied. It is a widely accepted theory that racial mixing, such as occurs when Negroes, Indians, and whites are allowed to cross freely, does not harm physical size, vigor, or capacity for reproduction. Sterility from race crossing in man does not occur; and apparently physical retrogression is equally uncommon. In fact it is possible that heterosis, or hybrid vigor, may here be demonstrated. (As a matter of fact heterosis is not common among the Mestizos.) But in spite of the fact that wide racial-crossing has no ill effects physically, it is usually considered undesirable, because the various social inheritances are often decidedly different, and not infrequently crossing results in a clash of, or at least an interference in, social heritage.

Unfortunately definite information concerning specific instances of racial-crossing are not easily obtained in South America. Not infrequently the Mestizo child of an Indian mother does not know its father, in which case it is obviously impossible to describe the offspring in comparison to its parents. But while this may not

be done in individual cases, and though individual pedigrees are not often obtainable, just conclusions may be reached by a consideration of the group.

Physically, the result of crossing between Caucasians and Indians seems to have been an intermediate type. According to Prof. Ross, the comparative race performance for 1,500 school children in Lima, Peru, in running, jumping and chinning tests was, Negroes 50, whites 35, Cholos or Mestizos 28, and Indians 14. Here in a limited number of school children one notes that the physical development of the hybrid race is intermediate between the two parent performances, though approaching the higher level.

No doubt a more or less intermediate state of development, both physical and mental, is the usual result of wide race-crossing in South America and elsewhere, though all hybrids are not located in the mean between the two parent stocks. It is the exceptions which the traveler, and prejudiced observer, is likely to overemphasize. There are in Brazil individuals, obviously possessing Negro blood, of high intellect and accomplishment. Nor is it by any means an unheard-of occurrence, on the western coast, to find hybrids with aboriginal blood, forcing themselves to the foreground.

In Bolivia and Peru there are many Mestizos or Cholos. As a class these people usually free themseves from numerous Indian customs. They adopt the Spanish language and wear distinctive clothing. Often they occupy themselves with small shops in the market place, or elsewhere. From this class arise at times well educated young men, who, freed from the caste scorn of work present among the Spanish "gente," accomplish much in law, medicine and business. Unfortunately, these individuals represent the exception rather than the rule. The masses of the Cholo population reach no such degree of education or accomplishment. One who observes the Cholos and Cholas, Mestizo men and women, gathered at the market place of La Paz on Sunday morning, and realizes that in them he sees the result of two or three hundred years of interbreeding, interbreeding which commenced on a small scale nearly four centuries ago, must despair of any great future for a people who will be endowed with the inheritance which the Cholos have to transmit.

To be sure, the Cholas in their holiday attire, with brilliantly colored skirts and petticoats, shawls and ponchos, tall straw hats and high kid boots, are quite easily distinguished from the full-blooded Indians. Their ability to converse in Spanish, and their greater initiative, are promising. But if one applies the test of actual accomplishment to these Mestizos, he notes that during the last two centuries they have failed to supply a serious want in South American society, a need which one may say should been met by them. "Pure" Indians form the lower serf-laboring class, and haughty descendants of the early Spanish conquerors perpetuate the ruling aristocratic class, but there is no middle class, especially in the social order of Peru and Bolivia. The Mestizos have thus far failed to supply a much needed middle class. Brilliant energetic Cholos have advanced to the aristocratic gente. Others have progressed slightly beyond the impassive apathy of the aborigines, but as a class the Mestizos give small hope for future greatness.

It is possible that the environment may exert some detrimental influence

on the advancement of the Mestizos. One can conceive that the ceaseless struggle against a seemingly pitiless nature, on the arid, barren slopes of the wind swept Andes, during countless generations, has left an imprint which can be removed only by a change of environment, for race-crossing up to the present time has had only a limited effect upon them. But it is quite as possible, and no doubt more probable, that their Indian parents transmitted to them a heritage decidedly inferior to that of the whites.

Perhaps partial proof of this contention may be found by glancing at the Mestizos who have resulted from crosses with Indians of other tribes, notably the Araucanians of Chile. Although these Indians do not have the capacity for organization, or the intellect, which the whites have, nevertheless, they are far more energetic than are the Indians of Peru and Bolivia. As factors in the environment of the early conquistádores and colonists, they were much more desirable than the Quichuas and Aymarás. Their bravery and spirit kept the Spaniards perpetually watchful and active. The colonist in Chile could not, with safety, establish himself in Santiago, surrounded by idleness and intemperance, and leave the working of his mines, the tilling of his soil, to the Indians. He was forced to live on his holdings, and to direct the work in person. The result was that among the conquerors, race degeneracy was not so common as it was where the Indians were more tractable and servile. Furthermore, the hybrids resulting from the race-crosses which began extensively at an early date in the garrisons, who compose about sixty percent of the Chilean population, are far more aggressive, more energetic workers, and more spirited warriors than the Cholos of Peru and Bolivia.

The formation of a national type has been far more complete in Chile than in other countries where Indians were equally numerous at the arrival of the Spaniards. There has been almost no reversion to type, so complete is the mixture. This is no doubt due to early extensive race-crossing and the contemporary and subsequent drastic diminution of pure blooded Indians. For example, as early as 1550, married men in Valdivia are reported as having up to thirty concubines each. But even the hybrid "Rotos" of Chile are not of a satisfactorily high development. They are bold and spirited on unusual occasions (witness their Indian ancestors at the invasion by the Spaniards, and themselves in the war against Bolivia and Peru) but ordinarily they exhibit the pride of their Spanish ancestors and the dullness of the Araucanians.

One is forced to conclude that the hybrids resulting from the crosses between whites and Negroes, whites and Indians, and Indians and Negroes, are inferior to the original white stock. As a class the hybrids have failed to show the initiative and the accomplishment of the whites. They have not supplied South America with a much needed active intelligent middle class. No doubt South America is backward to-day primarily not because of its location or climate, but because of the numerical predominance in its population of an inferior hybrid class.

Further proof of this contention will be advanced later in considering the controls, Argentina and Uruguay, where climate and natural environment are similar to those of other South American countries, but where the genetic factors are different.

There is in South America an excellent opportunity for observing the action of some of the so-called racial poisons, alcohol, syphilis, and diseases of occupation. Alcohol has been widely recognized and extensively studied as a factor in natural selection. Everyone knows that in general there are three reasons why individuals drink alcoholic beverages. Alcohol is taken (1) in response to a natural thirst, (2) because to some it has a pleasant taste, and (3) because the drinker likes the sensations which result from its action. Any, or all, of these reasons may obtain. The first two, however, are relatively unimportant in our discussion, for they seldom lead to intemperance; and the third has in many cases, already observed in other continents, proved to be of a beneficial nature, in that it has eliminated excessive drinkers by premature death. It has been beneficial, we hold, because in many instances it is probable that alcoholism is an indicator of degenerate stock. The premature death of the drunkard will naturally prevent him from producing numerous degenerate offspring.

But alcoholism is not always limited to the degenerate stock of a race or group. Differences of temperance and intemperance not only occur among the individuals of a group, but also among nations and races. Races which have long been acquainted with alcohol are usually far less intemperate than other races. The reason for this is no doubt the fact that, because of a long familiarity with alcohol, the individuals who succumb to excess have been eliminated. The Southern Europeans, who have had easy and prolonged access to wines, etc., exhibit, at present, a small amount of excess; while the North Europeans often offer examples of intemperance. Among the Indians this phenomenon is even more striking. A craving for alcohol, as described by William James in the following passage, is by no means infrequent among the aborigines of the Southern continent. "The craving for drink in real dipsomaniacs, or for opium and chloral in those subjugated, is of a strength of which normal persons can have no conception. 'Were a keg of rum in one corner of the room, and were a cannon consistently discharging balls between me and it, I could not refrain from passing before that cannon to get that rum. If a bottle of brandy stood on one hand, and the pit of hell yawned on the other, and I were convinced I should be pushed in as surely as I took one glass, I could not refrain!' Such statements abound in dipsomaniacs' mouths." While such individuals are decidedly the exception even among northern peoples, they are numerous among the Indian races of South America. Witness the so-called hooking method of obtaining men for work in the mines high above sea level. It must be remembered that the aborigines have little interest in accumulating money. They dislike work in the underground passages of the mines; and they are equally reluctant to leave their homes and families. In spite of these strong inhibitions which would ordinarily prevent the Indians from accepting work in the mines, their desire for alcohol is so overwhelming, that during periods of possible alcoholic debauch, notably during religious festivals, the aborigines will go to almost any extreme to procure alcohol or the money with which it may be purchased. The mine representatives, cognizant of this fact, offer the desired money to the Indians if in turn the natives will

sign a contract to work for a certain period. That this system is by no means unusual is shown by the fact that many of the underground workers in the Cerro de Pasco mines were obtained by this method. In fact, the uncontrollable desire for alcoholic liquors present, generally, among the aborigines is universally recognized. The president of the colony of the Perene, in eastern Peru, where a large number of Indians are employed, informed us that alcohol was given to the Indians only in limited quantities and infrequently. The same is true of many other corporations in which Indians are employed. It seems quite probable, that in the case of the native races of South America it is far more desirable to make use of drastic prohibitive measures generally, than to await the slow course of natural selection. The reasons for such a premise are fairly clear. If one grants that alcoholism is a characteristic of the race as a whole, present on account of racial unfamiliarity with alcohol, then, unless race suicide is desired, similar to that which has occurred among North American aborigines, prohibitive methods must be established. If alcoholism is not admitted to be a racial characteristic in this case, though there is little doubt of it, still everyone will agree that it is far more prevalent among South American Indians than among European peoples; prevalent to a degree which would insure selection of the most drastic sort if prohibition were not provided.

Is such drastic selection desired? I believe that it is not. The Caucasian races have established their supremacy in South America, and there is every reason to believe that they will and should maintain it. If such is the case, then the rôle of the aborigines will be one of laborer, rather than contributor to the intellectual life and the social inheritance of the continent. To eliminate the Indian as a laborer on the west coast, at the present time, would be a severe handicap. Likewise, a drastic diminishing of the native population would be economically disastrous.

The effect of alcoholism upon the environment of the home is far less noticeable among the aborigines of the Andean plateaus than among the inhabitants of our own nation. Everyone is familiar with the fact that in North America drunken parents do not take proper care of their offspring, that homes are poorly furnished, opportunities for good education are often withdrawn, etc. But in South America the home environment would not be so seriously affected. Homes are already poor. Parental training in native families, especially from the fathers, is almost universally absent, while good education is almost nowhere received. But, since alcoholism is undoubtedly the cause of widespread premature death among the aborigines, and since there seems to be comparatively little reason to employ it as a selective agent, we must conclude that its prohibition is desired.

The diseases which the white conquerors brought to South America were particularly deadly to the native races which had not encountered them previously, and had had no opportunity to develop an immunity against them. Tuberculosis, smallpox, measles, and other imported diseases found high susceptibility among the aborigines, gathered under unnatural conditions in mines, and in religious assemblies, with the result that native population was at first rapidly reduced. Reciprocally, one notes that Europeans suffered severely from the diseases to which

they had not yet become immune, viz., tropical fevers of various kinds, etc. Unfortunately, selection of the type just mentioned does not select according to superior mental or moral traits, but rather in respect to physical fitness alone, the result being possibly a better animal, but not necessarily a better man.

There can be little doubt that venereal diseases of all kinds are present in South America, though statistics are not available. Whether the poison of syphilis has a permanent or induced effect upon the germ-plasm is still more or less of a question, but for many parts of South America today, owing to the absence of sanitary precautions, the question is of relatively small importance. The fact is that children are always liable to infection from their parents at birth or later. The need is clearly one of more knowledge and application of sanitary measures.

A disadvantage which is more or less universal among South American Indians and their descendants is the general absence of marriage among the lower classes. When to this is added the restlessness of the men, the children are often left to the charge of the mother, with the result that the child lacks a father's training. This aligns itself with environmental factors, and is a striking example of the clash of the social inheritance and customs of the different races.

Even now the percentage of illegitimate births in Chile and other parts of South America is astounding. In Chile, for example, the number of illegitimate births has not been less than 300 per 1000 since 1892, and in 1917 it rose to almost 400, and was only a little less in 1918. The statistics include the whole of Chile. No doubt if the large cities and towns were excluded the rate would be much higher. The causes of illegitimacy are, no doubt, racial social inheritance, high marriage fees for religious weddings, and the unpopularity of civil marriage.

Infant mortality is another of the selective factors which has been at work among the natives of South America. There is little doubt that the birth rate among the aborigines is greater than that of the South Americans of European descent. In spite of this fact, the increase in Indian population is not noticeably greater than that among the whites; the reason unquestionably being the existence of a higher infant death rate among the natives. This does not mean that the Indians are necessarily physically weaker, but merely indicates the poor care which we have already mentioned is offered to the native offspring, and the deplorable lack of knowledge and practice of sanitation.

There has been a similar action of the factors of natural selection among the Negroes resident in South America, for the most part confined to Brazil. Many diseases, against which the race had not yet developed immunity, were ravaging in their lethal effect. But everyone is already so well acquainted with similar circumstances in the experience of our own Southern states that we will not go farther into this discussion.

An interesting example of the "non-modifiability of germ-plasm" occurs among some of the Indians of the Amazons. In the valley of the Putamayo, one of the northern affluents of the Amazons, there are Indians who bind the lower leg of all female members of the tribe in two places. Just below the knee, the leg is bound with palm fibers, and again, similarly, at the ankle. The result is that these two regions of the leg are

never allowed to receive their normal development. In spite of this artificial modification of the soma which has occurred for many consecutive generations, it is, of course, still necessary to bind the leg if the desired modification is to be achieved. There has been no modification of the germplasm.

War offers an interesting array of eugenic and dysgenic effects in any place or among any peoples. South America presents a peculiarly interesting field for speculation, for there exist, side by side, races of widely different development. In any nation the problem of what individuals should make up its standing army, or should fill its fighting units in the event of war, is important enough, even though the selection is exercised only among individuals of the same race. When there is a possible selection among extreme races, when whites and Indians are in the same nation, or the content of a nation is augmented by the presence of Negroes, then the question of who shall compose its fighting force is decidedly more momentous.

Everybody is already acquainted with the fact that lasting differences between races do exist. We are familiar with the evidence brought forth in support of this contention, viz.: that development and achievement vary when races are isolated, that variation of accomplishment also occurs between two races when they are competing side by side, and that the contributions to the social inheritance of mankind from the several extreme races is not equal. All of these types of evidence have been brought forward in demonstrating that the permanent race differences do exist among the races of South America, and that, in general, the Indian and Negro races have exhibited their racial inferiority to the whites.

The content of the fighting forces of the several nations should be based on an appreciative understanding of the existing racial differences. The Indians of Chile, as has already been noted, make excellent warriors, bold and daring to a remarkable degree. The Quichuas and Aymarás, of Bolivia and Peru, while not so bold as the Araucanians, are, nevertheless, steady, persistent, trustworthy soldiers. It is clear that the Indians of the western coast countries should comprise the mass of the armies, and, happily, this is true to a certain extent to-day. Even in Argentina, where Indians are few in number, one sees them frequently among the troops stationed in the Provences.

Brazil, with a population in which there are many Negroes, many whites, and a fairly large number of aborigines, has, perhaps, the best opportunity for exercising wise selection in the formation of its army. But one must remember that Brazilians do not consider the Negroes as a race inferior to the whites. The response which Brazil makes is not based upon racial selection. Recently, Brazil has adopted a form of universal training. the practical result of which it was too early at the time of our visit to observe.

The officiers in many instances, especially in the armies which are trained by Europeans, are now being enrolled from the upper classes. This is true of Chile and Argentina especially, and more recently of Bolivia and Peru.

South America presents one of the most striking examples in history of the drastic wartime diminution of a race. During the war of Paraguay with Brazil, Argentina, and Uruguay, the population of Paraguay was reduced to a startling degree. A glance

at the population of the nation before and after the war will serve to convince us of the truth of this assertion. At the beginning of the war in 1864 the population of Paraguay was 1,337,437. Five years of struggle reduced the population to a total of 221,709. A clearer conception of the dysgenic influence of this reduction is obtained when one considers the composition of the total population in 1869 when the war ended. Of the 221,709 people then resident in Paraguay, 26,746 were men, 106,254 women, and 86,079 children. These statistics show clearly not only the awful decrease in the number of male inhabitants in the country, and the consequent abnormally large ratio of women to men, but even more strikingly the unusually small number of children, which is even less than the number of women. David Starr Jordan, in commenting upon this case, says that, "Here in a small area has occurred a drastic case of racial ravage without parallel since the Thirty Years' War."

The somewhat similar destruction of the males among the Araucanians of Chile, and the consequent high ratio of women to men, after the long struggle with the conquistadores, has been mentioned previously.

Certainly there is need in South America of exercising extreme care in the formation of an army in the several countries where whites and Indians, or whites, Indians, and Negroes exist side by side.

It has been previously noted that the countries of South America where the Indian and hybrid elements of the population predominate numerically have not realized the height of development which has been achieved in the United States where juxtaposition of widely divergent human races has not produced extensive and indiscriminate racial inter-breeding. It has been stated that the cause of the inferior development of these several nations is the numerical predominance of inferior stock. Some, however, may maintain that it is a result of environment rather than heredity. It is often held that tropical climates inhibit the expression of the excellencies of an individual or race which would be expressed were the individual or race surrounded by a more temperate climate. The lack of development among the Negroes of Africa and among some South American peoples has often been attributed to the influence of the environment. But the rôle of environment vs. heredity, or in conjunction with heredity in South America will be made fairly clear by a comparison of the peoples of Peru and Argentina, for example, where the differences of environment, though not wholly absent, are comparatively small, but where the differences in parent stock and in inherited possibilities are great.

An understanding of the people of Argentina and other South American countries, to-day, can be obtained only after a consideration of European immigration.

Immigration into Argentina has occurred to an extent unequalled save in the United States. The total population of Argentina on December 31, 1909, was said to be 6,805,684. Of this number about 50 per cent. or 3,409,540 were immigrants. Between 1857 and 1909, inclusive, there had immigrated into Argentina:

Italians	1,892,721
Spaniards	882,271
French	192,436
Russians	93,349
Austro-Hungarians	64,252
English	44,971
Germans	43,856

Swiss, Belgians, Portuguese, Dutch,

Danes, North Americans, and Swedes follow in the order named.

Between 1909 and 1914, a period of five years, the total immigration since 1857 increased to 4,665,725 or over 50 per cent. of the total population. The four leading nations at this time were Italians 2,284,882; Spaniards 1,472,579; French 214,198; and Russians 160,672. During the war period immigration fell off a bit, in 1915 there being 86,166 immigrants, while in 1917 there were only 51,665. But at the time of our visit in 1920, in spite of the fact that immigration officials were more strict than formerly, due to the fear of the entrance of radicals, Italian and other Europeans were beginning to arrive in large numbers.

To-day the Argentine is one of the most, if not the most progressive country of South America, and there can be little doubt that its progress is due in no small measure to its overwhelmingly large percentage of European and other white stock.

Uruguay is also a country which has advanced rapidly; and it is again significant to note that its population of 2,548,000 individuals is without Indian or Negro constituency.

On the other hand of the 2,889,970 people resident in Bolivia in 1900, 51 per cent. were Indians, 27 per cent. were Mestizos, while less than 13 per cent. were whites. There has been little recent immigration into Bolivia.

Similarly in Peru there were at the last official census in 1876, 2,660,-881 inhabitants of whom less than 14 per cent. were whites. Immigration into Peru is also deplorably small.

Even in Chile, with a total population of over four millions, the total immigration between 1905 and 1914, the beginning of the European war, is given as only 25,544. No doubt the reason why Chile shows so high a development in the absence of a large continual influx of Europeans is because the total Indian population, estimated at 170,000, is not sufficient to be a severe handicap to the country. Obviously there is no comparison between the probable effect of 170,000 Indians in Chile, some of whom are Patagonians and have influenced the whites scarcely at all, and the more than 2,000,000 Indians and hybrids in Bolivia.

Paraguay, a country sadly backward in its development, with an estimated population of 1,000,000 in 1916, had but 60,000 foreigners, of which 30,000 were from Argentina. It is significant that by far the bulk of the population is composed of Indians.

Brazil with a population said to have been 27,473,579 in 1917 had received about three and one half million immigrants, for the most part Latins, including 1,361,266 Italians; 976,386 Portuguese, and 468,583 Spaniards; while the state of Rio Grande do Sul, like Southern Chile, contained a large German colony, numbering 122,830 and composing more than half the population of the state.

The types of immigrants in South America, for the most part Italians, Spaniards, Portuguese, French, and other Europeans, are already so familiar to the eugenicist of North America that a repetition of their characters will not be made here. It is, however, of extreme interest to know what in general have been the results of immigration in South America, and to note whether or not immigration is desirable there.

There can be no question that the extereme progress of Argentina, Uruguay, and certain parts of Brazil and Chile is due to the preponderance of the white race over other races. It is equally certain that the comparative

backwardness of Bolivia, Peru, and other South American countries where Indians and hybrids are greatly superior in numbers to the whites, is due to the numerical predominance of the inferior races. After all, the climate of much of Peru and Bolivia cannot with any fairness be termed tropical, in spite of the fact that the countries lie within the tropics. The climate of both countries is in a large part not greatly dissimilar to that of Argentina or Chile. The great difference of the contrasted countries lies in the racial content rather than the environment. There can be no reasonable doubt that the observed difference in national progress among the several nations is due primarily to the self-demonstrated disparities in their human stock. Those nations whose population is chiefly white are progressive, while those whose constituency is largely Indian and hybrid are backward. It is natural and logical to conclude that a numerical superiority of white stock in, and consequently European immigration to, South American is highly desirable.

Argentina, it is true, is so located as to be fairly easily reached by immigrants from Southern Europe. But at the same time the Argentine government has realized the value of introducing European blood into its country. It has invited Europeans, especially Italians, Spaniards, and French, to make their homes in Argentina. As early as 1876 it had enacted an immigration law extremely generous to the immigrant; for example, Article 14 states in part—"Any immigrant who sufficiently establishes his good conduct and his aptitude for any industry, art or useful profession, will have the right, upon entering the territory, to enjoy the following advantages:

"1. To be lodged and nourished at the expense of the Nation during the time fixed by articles 45, 46 and 47.

"2. To be placed at work, or in that industry existing in the country, to which he prefers to devote himself.

"3. To be transported, at the expense of the Government, to the place in the Republic where he wishes to fix his residence.

"4. To introduce free of customs' duty, objects of use, clothes, furniture, agricultural implements . . . ," etc.

Nor did these advantageous laws remain unknown, for they were translated into foreign languages, and together with other information made available to prospective immigrants. Argentina has received a large number of immigrants not only on account of its location but also because it has encouraged immigration; and it has benefited in so doing.

In Peru and Bolivia the possible effects of extensive immigration are twofold. In case racial interbreeding between the immigrants and aborigines did not take place to any large degree the Indians would eventually either be placed in reservations, as in the United States and Southern Brazil, or they would occupy a position in some degree similar to that of the Negroes in certain parts of the northern United States. Their status would not be one of overwhelming numerical superiority. They would be valuable factors in the agricultural and economic development of the country, under white leadership, but they would not overrule the country with their unambitious, lethargic method of existence. The wresting of the numerical power from the Indians and hybrids of Peru and Bolivia would no doubt be followed by national progress and development, especially if

race-crossing were discontinued. In the event that racial interbreeding were not discontinued, progress, though less rapid, might still be expected if the white immigration were sufficient, for it has already been noted that the aboriginal elements of the population are more likely to succumb to the struggle for existence, than the European elements. In any case it is certain that increased immigration of European stock to Peru and Bolivia would faciliate national development and is desirable.

One naturally wonders if in the presence of such an opportunity and need for the practice of the theories of eugenics there are no individuals who have interested themselves in the cause. For the most part there has been little attention given to eugenics in South America. Recently, however, some of the most far-sighted doctors of Buenos Aires have realized the value of eugenics, and a society has been formed under the leadership of Dr. Gallardo. Unfortunately Dr. Gallardo was absent upon his summer vacation during my visit to Buenos Aires. The society holds meetings from time to time, and no doubt it is only a question of time before its influence will be effectively felt.

At Corba, Argentina, Dr. Delfino has shown his interest in eugenics by publishing an appeal for legislation prohibiting the marriage of individuals carrying serious contagious diseases. I called upon Dr. Delfino who was eager to receive the support and commendation of the leading scientists of the world, that his proposed legislation might have more weight with the provincial government. Such reforms will no doubt be slow of accomplishment. But there is no reason why several of the governments should not be immediately convinced of the value of selective immigration, especially in Peru and Bolivia, and other countries to the north not included in this study. At the same time public opinion should be educated against indiscriminate crossing of whites with Negroes or Indians, an experiment which thus far has not produced satisfactory results.

Conclusions.

The characteristics and social inheritance of the peoples which entered early into the mixing of races in South America have been noted. It has been seen that the several races, white, Negro, and Indian, were not all at the same degree of development; that the Negro and Indian races have been drastically acted upon by lethal factors of natural selection. From various kinds of evidence, viz.: height of development in isolation, amount of contribution to the social inheritance of mankind, and finally, comparative response to racial competition, it is concluded that both the Indian and Negro races, as represented in South America, are inferior to the white race. In spite of this fact, no barriers to racial interbreeding, save the barrier of social class, are found existing commonly in South America. Consequently, race mixing has been going on, almost unchecked, since the earliest days of conquest and colonization. Nor, speaking generally, have the resulting hybrids been looked down upon by any of the pure blood parent stocks. The hybrids themselves have generally been of a type intermediate between the two parent stocks, both physically and mentally. There have been some exceptions in both directions of development: some exceptionally brilliant, and some exceptionally stupid. In spite of this seeming

intermediate position of the hybrids, they have failed to provide South America, as a whole, with that which it seriously needs, namely, an active, intelligent middle class. Not only has the mixing of races failed to produce a satisfactory germinal complex in the resulting offspring, but the effect of the propinquity and crossing of races as an environmental factor has apparently been unfavorable to a normally full expression of the possibilities which the germinal complex may hold. Indeed anyone who is interested in rapid and permanent progress in South America, especially in those countries where crossing between the races already mentioned has been great, and where the hybrid class, or the inferior race, is greater in number than the white race, must often despair of the realization of his hope. Eugenically, the crossing of widely different human races, viz., Indians, Negroes, and whites, in South America has not been successful, and its continuance is undesirable.

But in some countries of South America interbreeding of widely dissimilar races has not occurred. In these countries the need of rapidly increasing the population has been met by immigration rather than by hybridization with the native stock. It is significant that the nations in which immigration has been greatest exhibit to-day the highest national development to be found on the continent. Nor is the difference in natural environment between these and less developed nations sufficient to account for the disparity of national development. It is fair and logical to conclude that the differences of development are due to inequalities of germinal potentialities for development existing among the several races of the nations. It has already been stated that race-crossing should be discontinued in South America. At the same time the hybrids should be replaced, and the general stock of Europeans renewed by abundant selective immigration. In this way an active, intelligent middle class could be produced in the backward nations of South America, which would allow those nations to take their places with European countries of similar size and resources. A knowledge and practice of eugenics is necessary for the rapid development of those countries of South America where inferior races and hybrid stock are present in large numbers.

OUR RACIAL DECAY.

We are used to hearing of racial deterioration in England and failure of reproduction in France—such, we smugly think, are characteristics of the effete countries of Europe. Now comes Dr. W. S. Sadler to tell us that there is great Race Decadence in the United States. It is a good thing to face the facts whatever they are. Dr. Sadler has written an interesting book and one that will no doubt do good in awaking the public to the seriousness of the situation in this country. The work is divided into two parts, dealing with physical and mental decadence respectively. The frequency of defects of drafted men, cancer, tuberculosis, venereal diseases, and diseases of old age are considered. On the mental side, the facts of neurosis and statistics of insanity, feeblemindedness, feeble inhibition are elaborated. There is an appendix of statistical tables. The book is well written and contains many valuable data.

W. S. Sadler. 1922. Race Decadence: an examination of the causes of Racial Degeneracy in the United States. Chicago: McClurg, xi–121 pp.

HEREDITY OF THE REV. FRANCIS G. PEABODY.

Francis G. Peabody, born at Boston, Dec. 4, 1921, was long the Plummer Professor of Christian Morals at Harvard University, in charge of the College Chapel and the confidant of all students in trouble. In 1874 he was made pastor of the First Parish Church of Cambridge, where he preached for six years. Dr. Peabody has published many volumes of councils and sermons and like his father, not a few poems.

His father was Ephraim Peabody who was born at Wilton, New Hampshire, in 1807, son of the village blacksmith and justice of the peace and his wife Rhoda Abbot, sister of the Rev. Abiel Abbot, a D.D. of Harvard University and a man of independent thought. Ephraim was graduated at Bowdoin College, became editor of the college journal, and wrote much prose and in later years notable poetry. He became a much beloved pastor in Cincinnati for some years, in Mobile, and then in New England especially at King's Chapel, Boston. He had that same insight into the problems of others and the same accurate judgment into people as his son. The father, like the son, had an interest in people. It was his ideal expressed at his ordination, "to be a brother and a son to my Parish." His conversation, like his son's, "was a continuous unpremeditated flow of clear sparkling gentle waters."

Francis G. Peabody's mother was Mary Jane Derby, born at Salem into a family of merchants and shipmasters. She was a woman of vivacious disposition and great brilliancy of mind. She had much artistic talent and drew not only on paper but also on stone.

Her son, Robert S., was a leading architect who specialized in landscapes. The mating of the sober-minded, poetic minister and the vivacious, apparently frivolous young woman was quite a normal one—the one consort brought to the combination what the other lacked; and transmitted a well-balanced heritage of devotion and brightness to the son.

F. G. and R. S. Peabody. 1920. A New England Romance. The Story of Ephraim and Mary Jane Peabody. Boston and New York. Houghton, Mifflin Co. 164 pp.

BIOLOGICAL BEARING OF ARMY MENTAL TESTS.

Dr. Arthur H. Estabrook, in *Social Hygiene* for July, 1921, presents a paper in which he outlines the work of the Division of Psychology in the army. In the concluding paragraph he states: "To the army the chief value of the psychological work lay in its ability to aid in the production of an efficient war organization. Its activities dealt largely with cacogenic persons, with less emphasis on the positive side of eugenics. However, the Division of Psychology at Washington has in its files a mental rating of one and a half million persons. It has lists of all the mentally defective and abnormal found, with more or less of their personal history attached. Thus, as a starting point, great eugenical studies could be made, and many valuable histories worked out. Finally, the cross-section of the mental and physical make-up of the population started in the great emergency by the army might be made the basis for a complete mental, physical, and social study of the entire population of the United States."

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THE EUGENICAL NEWS.

With this issue of the EUGENICAL NEWS the policy the Eugenics Research Association to develop the EUGENICAL NEWS into a magazine, at the same time preserving its news features, makes its initial practical attempt. If properly supported, the Editorial Committee will be able, during the year 1922, to issue four of the twelve numbers in this form. The future development of the journal will depend upon the reception and support given to these experimental issues.

WHITTIER CASE HISTORY MANUAL.

The California Bureau of Juvenile Research has issued the "Whittier Social Case History Manual," which sets forth the method of personal history elaboration worked out at the Whittier laboratory, based on the methods of the Eugenics Record Office.

THE EUGENICS RESEARCH ASSOCIATION.

NEW MEMBERS. Members of the Eugenics Research Association are invited to nominate, for membership in the organization, their friends and associates who are actively concerned with eugenical studies, or who are interested in supporting such activities. The former class of persons are eligible to active membership, and the latter to associate and supporting memberships, and as patrons. Nominations may be sent to the Secretary of the Eugenics Research Association, Cold Spring Harbor, Long Island, N. Y.

PRESENT MEMBERSHIP.

Active Members	193
Associate Members	259
Supporting Members	13
Life Patrons	1
Total Number of Members	466

HISTORY OF MEMBERSHIP DUES.

1913–1917.

Active Members	1.00
Supporting Members	3.00

1918–1921.

Active Members	1.00
Associate Members	2.00 (1920)
Supporting Members	3.00
Life Patrons	100.00 (1921)

1922–

Active Members	2.00
Associate Members	5.00
Supporting Members	10.00
Life Patrons	100.00

The EUGENICAL NEWS has been given with all memberships since January 1, 1918. In August, 1920, the Eugenics Research Association took over the ownership of this paper from the Eugenics Record Office, at which time the EUGENICAL NEWS became the official organ of the Association. At this date also the policy of making the fiscal year synchronize with the calendar year was adopted.

ADDRESSES OF FOREIGN CORRESPONDENTS.

Prof. Kenjiro Fujiro, Department of Botany, Tokio Imperial University.

Prof. Hiratorio Anoto, Agricultural College of Kyushu Imperial University, Tukuoka City.

Russian Eugenics Society, Prof. N. K. Kolzoff, Sivtzeffvrajek 41 (Moscow).

EUGENICAL INTERESTS IN JAPAN.

Sugao Yamanouchi, of the Anthropological Institute, Science College, Imperial University, Tokyo, under date of January 21, 1922, writes to the Eugenics Record Office that he is much interested in eugenical studies, and especially in the schedules and pamphlets on heredity and eugenics, published by this office. He intends to fill out the "Record of Family Traits" for his own family and has already set out to collect the facts. For his professional research studies he expects "to carry on field-work in a mountainous district where inbreeding prevails."

EUGENICS IN NEW SOUTH WALES.

Under date of December 31, 1921, John C. Eldridge, the Secretary of the Eugenics Education Society of New South Wales, addressed the following letter to the Eugenics Record Office:

136 Upper Spit Rd.,
Mosman, N. S. W., Australia.

Dear Dr. Laughlin:

The War considerably hampered and disorganized our work in Australia. As you are probably aware, I became a member of the Australian Imperial Force. I was not able to return from abroad till a little over a year ago, since when many matters have occupied my attention, or you would have heard from me earlier.

I now write to inform you our Society has resumed activities, and I will be pleased if you will place me on your mailing list for any literature or notices your office may be distributing. One of your latest catalogues would be useful; also (if you stock same) a directory of Eugenic and allied organizations. Sorry we were not able to take part in recent International Congress. I intend to regularly advise you in future of Australian events. Meanwhile please accept cordial greetings and best wishes for the New Year, and kindly convey the same to Dr. Davenport. Yours faithfully,

(Signed) John C. Eldridge,
Hon. Secretary.

P. S. Do you still publish your Eugenical News? We found it a very useful index to events on your side of the world.

A BIBLIOGRAPHY OF HEREDITARY EYE DEFECTS.

Dr. Lucien Howe of Buffalo, New York, a Fellow Royal Society of Medicine and President of the American Ophthalmological Society, is the author of a complete and critical bibliography of hereditary eye defects. This list contains approximately 800 titles from the best biological and medical literature of the world and is published by the Eugenics Record Office as Bulletin No. 21. The titles are critically selected and carefully classified. The general topics of statistics, other bibliographies, Mendelism, and consanguinity are duly covered, after which the references are classified according to specific hereditary eye defect. In all, there are 63 general subjects, each with its list of references. The whole work is a mine of information for the student who undertakes investigations into the hereditary nature of any specific eye defect.

MENTAL ABILITY IN ORPHANS.

Dr. Arthur H. Estabrook reported to the Indiana Academy of Science the results of a study of mental ability of children in one orphans' home in Indiana. In this report Dr. Estabrook says:

"All the children in one orphans' home in Indiana have been given mental tests, with the exception of those under the age of six years. The Stanford Revision of Binet tests was used. At the same time the Pressey group tests, the primer and cross out, were given to all those attending school. A social study of each child has been made and, with these combined data, children in this orphans' home have been classified as: average, retarded, probably high grade defective, and feeble-minded. At the same time these children have been considered from the standpoint of placeability in foster homes or admission to the School for Feeble-Minded Youth at Fort Wayne. One hundred forty children, in all, have been studied. Fifty-three of these have been found to be of average mentality, 37 retarded, 12 probably mentally defective and 38 definitely feeble-minded. One hundred one of these 140 are wards of the State. Of these 101, 34 are of average mentality, 24 retarded, 10 probably high grade defectives, and 33 feeble-minded. These have been classified as to their placeability in foster homes, retention in the institution for further study and training, and those sufficiently mentally defective that they should be placed in the School for Feeble-Minded Youth because of such a degree of mental defectiveness as to be unplaceable in foster homes or retained in the Orphans' Home. Forty-eight are found placeable; 15 should be retained for further study and training, while 38 are so definitely feeble-minded as to be a detriment to the institution."

"It is interesting to note that 15 children are advanced in age mentally and 23 grade exactly normal for physical age; 28, or 20 per cent., are retarded one year; 18, or 13 per cent., are retarded two years; 56, or 40 per cent., are retarded three or more years. This study shows the need of a mental examination and social study of all children in the orphans' homes in this state so that they can be properly classified and so that proper distribution of these in suitable institutions be made at the earliest possible moment, thus relieving the orphans' homes of the burden of the mental defectives who are properly not their charges, and paving the way for their proper care in a custodial institution for the feeble-minded."

(From the *Proceedings* of the Indiana Academy of Science, 1920, p. 69.)

CRIME AND EDUCATION.

A report received from the Clinton Prison at Dannemora, N. Y., contributes the following interesting figures to the study of relation between crime and degree of education:

Among a prison population numbering 1,207 inmates, 13 had college education, 89 had academic education, 1,023 had common school education, 20 could only read and write, 92 were illiterate.

LAPP-FINN-SWEDE.

Lundborg has studied hybrids between Lapp, Finns and Swedes, and concludes that they have a larger and more powerfully developed body and longer face than the pure races. It is thought that this is the result of race mixture (Upsala Läkaref. Förh 36).

A FRENCH PROBLEM.

In an interview with Professor Charles Cestre, sociologist of the Sorbonne, the New York Times quotes him as stating that big industrial leaders in France are offering special inducements in the way of wage increases to married men. "A nation-wide employers association maintains a fund to which each one of its members contributes in proportion to the number of his employees, and out of this fund is paid a sort of 'marriage bonus' and 'child bonus.' That is, every married man receives an addition of two francs a day to his wages and two francs a day for each child."

FRANCE AND GERMANY.

Mark Sullivan in the New York Evening Post, for February 18, 1922, claims that the present embarrassing position of France in Europe is due primarily to her low birth rate. He continues "when France fought Germany in 1870 each of the combatants had the same population, about forty millions. When she again fought Germany in 1914 France still had but forty millions whereas Germany had nearly seventy millions. This changed relation in population was her principal weakness. So long as the mothers of other nations are willing to go further in the sacrifices of bearing and rearing children, France must continue to descend in relative national strength. In the long run birth rate will wipe out boundaries, will creep around fortresses, and will make futile every kind of barrier set up for defence. In the relations of nations with each other, birth rate is a biological factor which has the strength of a force of nature."

ITALIAN EMIGRATION.

Since 1850 the population of Italy has increased more than 50 per cent. This made it possible for Italy to export, to her profit, many emigrants. During the decade 1901–1910, this emigration averaged 600,000 anually. In 1914 it was estimated that approximately 6,000,000 Italians were living in foreign countries. Of these, about four fifths were in North or South America. With the restoration of peace in Europe, Italy again confronts the necessity of finding an outlet for her rapidly increasing population. Ugo E. Imperatori, in an article in *Nuova Antologia*, advocates that Italian emigration to Brazil be supported. A generation ago it appears that the Italian emigrant to South America was ill-treated and suffered in many ways, but finally a million and a half Italians have domiciled themselves in Brazil, and these, it is claimed, will heartily welcome their compatriots in the future and make their establishment in the new country relatively easy.

FOREIGN BORN IN NEW YORK CITY.

In 1910, 56 per cent. of the population of New York City were native born and 44 per cent. foreign born; in 1920, 65 per cent. were native born and 35 per cent. foreign born. While there was a drop in the percentage of the foreign born, their absolute numbers increased, during the ten years, 63,744, but this was greatly overmatched by the increase in the native-born population. At the present time the population of New York City appears to be increasing about 100,000 a year. The Board of Health estimates that the population of the City in 1930 will probably approximate 6,650,000.

INDIAN-WHITE BLOOD.

Among numerous reports received from State Institutions in the United States, all of which bear upon the subject of racial descent of institutional inmates, we learn the following interesting facts from the superintendent of the Girls' Training School at Gainesville, Tex., Mrs. Carrie W. Smith:

"At the Texas Training School for Girls our greatest problems are the girls who have one eighth and one sixteenth American Indian blood. These girls show the racial facial types and marked physical strength, are mentally exceptionally bright, and have varied interests. They are inclined to be physically unclean, frequently objecting to the routine of daily bathing. Morally they are indiscriminating and sensual to a morbid degree, seeking indulgence with either sex. They are ego-centric, selfish, resentful of authority, but generally with considerable personal magnetism.

"It seems to me that these findings might be a subject for special research and that the results might indicate the necessity of regulating marriage with Indians."

DIAGNOSING TWIN PREGNANCY WITH STETHOSCOPE.

By attaching two or more diaphragms to the ordinary ear piece of a stethoscope, Gardiner has been able to diagnose twin pregnancy as well as to differentiate between the fetal and maternal circulation. The same device may be used to compare heart action and respiration.—From *Ohio State Medical Journal*, J. P. Gardner, Toledo, Feb. 1922, Vol. 18, No. 2, p. 125 (*Jour. A. M. A.*, Feb. 18, 1922).

THE EPICANTHUS.

The epicanthic fold is present in all races during fœtal life (Arthur Keith, Human Embryology and Morphology, third ed., 1912, p. 196).

It appears in a number of children of all races at birth, but with growth its degree decreases, so that by adolescence it has disappeared in most children in most races. It persists, however, as a normal racial trait in Mongolian races; and in other races as an individual anomaly of arrested development, often as a feature of the defective personality-complex called Mongolianism.

EUROPEAN CHILDREN WITH EPICANTHUS.

	Male.	Female.
1–6 months	33.1%	32.6%
7–11 months	25.6%	25.5%
2 years	20.3%	18.0%
3–6 years	14.0%	5.1%
7–11 years	4.4%	3.2%
12–25 years	3.3%	2.6%

Table from Lehrbuch der Anthropologie, Rudolf Martin (Jena: Gustav Fischer), 1914, p. 425.
(Note supplied by Dr. F. L. Reichert.)

GOITER FAMILIES.

Hotz knows of goiter families in which some of the children are of the cretin type and others of the exophthalmic goiter type, and the thyroid in all shows apparently identical pathologic anatomic changes. This testifies, he says, that cretin degeneration may be a consequence of excessive thyroid function. It is evidence that the functioning is perverted. Removal of the thyroid and ligation of the larger arteries improved conditions in the cretin children as well as in the exophthalmic goiter children.—From *Schweizerische medizinische Wochenschrift*, Basel, Dec. 15, 1921 (*Jour. A. M. A.*, Feb. 11, 1922).

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BOONE OF KENTUCKY.

Daniel Boone, born in Berks County, Pennsylvania, Nov. 2, 1734, moved with his parents to the forks of the Yadkin River, North Carolina, lived the life of a hunter and Indian fighter, participated in Braddock's ill-fated campaign against Fort Duquesne, and in border welfare with the Cherokees. With John Finley, Boone in May 1769, penetrated into the Kentucky country, where in the course of the next few years he explored and hunted and eluded or fought the Indians. He was engaged by Richard Henderson of North Carolina, who had a scheme of making himself proprietor of the Kentucky country (Transylvania), to open up, in 1775, a road from the Valley of Virginia, through Cumberland Gap to Boonesborough on the upper Kentucky River. Here Boone helped to build up the community and to defend it from Indians. After 10 years at Boonesborough he moved about to various places and finally to Missouri where he died in 1820.

Daniel Boone came of pioneering stock. His father migrated from Devonshire, England, to Pennsylvania, roamed about, married the daughter of a backwoodsman and settled down to clear for agriculture a portion of the forest and to hunt. The son hunted from early boyhood and owned a rifle at 12 years. His early school was the forest, though he was taught also by his mother and sister-in-law. He worked at his father's forge enough to learn to repair his traps and firearms. Boone was strongly nomadic. In his early years he went as far south as Florida and repeatedly crossed the crest of the Alleghenies. Combined with nomadism were bravery and resourcefulness. He organized and led the defense against the Indians, of the cabins along the Clinch river. When captured by Indians he bided his time to escape from them. When ambushed, he collected his comrades and beat off the assailants. Pertinacity was another essential trait. If Indians stole his collection of pelts, he must continue to hunt in order not to return empty-handed. If attacked alone by Indians he must not merely protect himself by momentary flight, but must follow and kill his assailants. Boone was not only a good fighter but also a tactician. He was superb in defensive fighting; and knew how to meet the immediate crisis. His councils in the legislature and his decisions on the bench were esteemed. He sponsored a law for the preservation of game in Kentucky and for improving the breed of horses. He did not rise however to the greatest heights of strategy and was not able to lay out a vigorous campaign.

H. A. Bruce, 1922. Daniel Boone and the Wilderness Road. N. Y. The Macmillan Company. xii + 349 pp.

BRITISH RECUPERATION.

Maurice Gregory, of 26 Devonshire Chamber, London, E. C. 2, who visited the Eugenics Record Office on March 16th, reports that the ratio of deaths to births in the County of London for the year 1920 shows a wonderful recuperation. For the year 1920 the death rate was 12.6 per thousand and the birth rate 26.+ per thousand. This is the most favorable ratio that London has experienced in eighty years.

REDINTEGRATION.

Professor Hollingsworth has made an attempt to replace the Freudian system with its mysticism and safe obscurity by a simple exposition of the central facts of systematic psychology. Redintegration, or "that type of process in which part of a complex stimulus provokes the complete reaction that was previously made to the complex stimulus as a whole," is postulated as the coalescing center of explanation for the phenomena of pathology. Any reaction is normal or abnormal according as the response made to the part (stimulus) is appropriate or inappropriate in the light of its contextual relations.

With this as a basis of interpretation the following interesting conclusions (based on army experience) are recorded: Psychoneurotics are below the mental status of the average soldier. Degree of intelligence determines the clinical picture; hence the prevalence of hysteric neuroses among privates, but anxiety neuroses among officers. The importance of the role of motivation from the viewpoint of therapy is evidenced by the data given that in the cases of psychoneuroses and hysteria the symptoms fell, after the armistice, 81 per cent. and 69 per cent. respectively. In regard to irregularity of profile, it was found that both the psychotic and defective groups showed variations in similar directions, the former having the greater variation and being especially unable to integrate details into a whole. This indicates that attentive apprehension and general mental alertness do not change as a function of chronological age, but learning capacity changes in definite and measurable degree, the relation between age and learning being an inverse one. Survey tests demonstrated a greater range of variability than individual tests, particularly in an upper direction, and therefore are not very reliable for individual purposes, but for groups are a fairly accurate measure of mentality.

H. L. Hollingworth. 1920. The Psychology of Functional Neurosis. D. Appleton and Co. New York. 259 pp.

MAN—THE ANIMAL.

It is well that the conception that man is an animal be kept constantly before us, and so the title of the book is well chosen. Many who accept the title would add—"but something more!" Well, what more? Perhaps this book will show us by what it fails to present. The book is really a textbook on the general physiology of man. It considers in turn: living protoplasm, the cell metabolism, the egg and its fertilization, human reproduction (a fairly satisfactory handling of a difficult subject in an elementary book), heredity (a fragment), disease, sensation and the nervous system, learning. Yes! there is one thing left out and that is conduct. Is that the "something more"? Perhaps it is. At least we treat bad conduct differently in dogs and men. We blame the man and hold him up to obloquy; but we only whip, shut up or kill the dog. The author suggests in his preface that the "religious experiences" of man are another aspect. What is meant by religious experiences? Love, fidelity, devotion, faith and hope; certainly the best of dogs have these. Clearly in studying man—the animal, we study man—the social organism, with his intelligence, his emotions and his instincts.

W. M. Smallwood: Man—The Animal. N. Y. Macmillan, 1922, 223 pp.

LEGALIZING ABORTION.

A bill has been introduced into the parliament of Czecho-Slovakia, known as the Landova-Stychova bill, which proposes the legalization of optional abortion when requested of a qualified physician by a woman before the third month of pregnancy. According to *The Lancet* of February 4, Dr. M. Wassermann estimates that about 100,000 illegal abortions are now annually performed in that country, and that the stricter application of the law would not diminish the figure. He believes that the proposed law would both diminish the dangers from clandestine abortion, and put a strong weapon in the hands of the community against the increase of diseased and criminal families. The bill is being very strongly opposed, and the suggestion is made that a committee of physicians and sociologists be formed to suggest means of remedying present conditions.

THE CATLIN MARK.

Dr. William M. Goldsmith, Professor of Biology, Southwestern College, Winfield, Kansas, recently deposited with the Eugenics Record Office a very interesting and unusual exhibit consisting of a charted pedigree, with photographs, x-ray pictures and labeled skull, of the so-called "Catlin Mark." This is a pair of thin areas in the parietal bones. X-ray pictures show these openings to be about one inch in diameter and situated, one in each parietal bone, near the angle of the sagittal and lambdoid sutures. The trait is clearly hereditary. In this family it is traced through five generations and appears in fifteen persons out of fifty-nine blood kin charted. The trait appears to affect both males and females. In only two cases did it skip a generation.

POPULATION: 1920.

Under the supervision of William C. Hunt, Chief Statistician for population, the compilations and analyses of the census of 1920 move apace. Thus, from the bulletin issued late in 1921, entitled "Composition and Characteristics of the Population," we learn that the total population of 105,710,620 was composed, by per cent., as follows:

White	89.7
Negro	9.9
Indian	0.2
Chinese	0.1
Japanese	0.1
Native white, total	76.7
Native parentage	55.3
Foreign parentage	14.8
Mixed parentage	6.6
Foreign-born white	13.0

The total urban population of 54,304,603 was composed, by per cent., as follows:

White	93.2
Negro	6.6
Indian, Chinese, Japanese, and all other	0.2
Native white, total	74.1
Native parentage	45.2
Foreign parentage	20.8
Mixed parentage	8.1
Foreign-born white	19.1

The rural population with a total of 51,406,017 was composed, by per cent., as follows:

White	86.0
Negro	13.4
Indian, Chinese, Japanese, and all other	0.6
Native white, total	79.5
Native parentage	65.9
Foreign parentage	8.5
Mixed parentage	5.0
Foreign-born white	6.5

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April 1922.

ACCESSIONS TO ARCHIVES OF THE EUGENICS RECORD OFFICE, MARCH, 1922.

BIOGRAPHIES, 7.

COLLECTIVE BIOGRAPHIES, 4.

GENEALOGIES, 4.

TOWN HISTORY, 1.

RECORD OF FAMILY TRAITS, 4.

INDIVIDUAL ANALYSIS CARDS, 11.

FIELD REPORTS:

Miss Earle: Description, 136; charts, 31.

Dr. Muncey: Description, 349; charts, 8.

Whittier School: Description, 312; charts, 9.

NOTES AND NEWS.

Isabelle Kendig Gill, '12, has a third son, Roger Lawrence Gill, born February 21, 1921.

Anna Wendt Finlayson, '12, has a second son, Alan Neil Finlayson, born March 3, 1921.

Dr. George Stevenson, of Ward's Island, has been appointed Psychiatrist at the Research Laboratory at Vineland.

Rev. Mabel Irwin, '19, is a lecturer of eugenics and social hygiene for the Boards of Health and Education of New York City.

Ruth Stocking Lynch, '12, is research assistant in the Department of Zoölogy, Johns Hopkins University, Baltimore, Md.

Adele McKinnie, '11, is Assistant Director of the Americanization Study of the Carnegie Corporation, 522 Fifth Avenue, New York.

Ethel Thayer Sweetser, '13, is the mother of a daughter, Elizabeth Thayer Sweetser, born August 19, 1921, at Brockton, Mass.

Dr. George P. Frets, of the Asylum "Maasoord" at Portugaal, near Rotterdam, has been appointed a member of the Commission of heredity of "Het Nederlandische Volk."

Helen T. Reeves, '10, is at present an investigator for the Department of Charities and Corrections of the State of Kentucky. Her address is Box 403, Frankfort, Kentucky.

Dr. S. D. Porteus, who has been for three years Director of Psychological Research at The Training School at Vineland, N. J., has taken the chair of Psychology at the University of Hawaii.

Dr. Harry W. Crane, '15, is now connected with the State Board of Charities and Public Welfare of North Carolina at Raleigh, to which he gives approximately two-thirds of his time in practical work with mental cases. The remaining one-third is devoted to the Department of Psychology of the State University at Chapel Hill. Dr. Crane's address is Box 632, Chapel Hill, N. C.

Dr. Lilburn Merrill, Superintendent of the State Custodial School, Medical Lake, Washington, in a letter under date of March 20, 1922, says: "There are two or three communities in this state in which the feebleminded appear to have a monopoly. Some time I must get an agent in the field to learn the facts. One little town, for example, that has only two or three hundred population, is represented in our population by eight children from four different families."

CALIFORNIA BUREAU OF JUVENILE RESEARCH.

The California Bureau of Juvenile Research is a department of Whittier State School, of which Mr. Fred. C. Nelles is superintendent. Recent legislation extends the functions of the Bureau to other institutions, and permits affiliations with universities and other organizations. The functions of the Bureau are wide, but its essential purpose is "to carry on research into the causes and consequences of juvenile delinquency, mental deficiency, and related problems." To do this, authorization is given for the carrying on of any type of investigation that may be advantageous.

The present staff consists of a director, two psychological examiners, a sociologist, four field-workers, a research clerk, and three stenographers. The work is carried on in the following institutions: Whittier State School, at Whittier; Preston School of Industry, at Ione; California School for Girls, at Ventura; Sonoma State Home, at Eldridge; and Pacific Colony, at Spadra.

The main lines of activity of the Bureau are as follows:

1. Original investigations, by staff members, of the related factors of delinquency and mental development. Studies already undertaken include intelligence, home conditions, conduct, after-success, excitability, will-temperament, delinquency and density of population.

2. Surveys of institutions and schools. Those published include Whittier State School, orphanages, Santa Ana Public Schools, and Bakersfield Public Schools. Mental deficiency survey of Southern California in preparation.

3. Psychological testing. Applies to all entrants of institutions, with experimental supplementary tests at frequent intervals.

4. Social case work. Includes detailed case studies, following the Eugenics Record Office method, of as many cases as possible.

5. Maintaining, for special observation, a group of boys selected from the commitments to Whittier State School. Includes the operation of an experimental ungraded room.

6. Practice training courses. These are divided into two major courses of twelve weeks each, one for psychological work and one for social case work. Open to recommended university and college graduates.

7. Publications. The Bureau publishes the Journal of Delinquency, a bimonthly periodical "devoted to the scientific study of problems related to social conduct;" a series of bulletins; and a monograph series.

The Bureau owes much of its success to the coöperation of the Eugenics Record Office, whose methods have been followed and adapted to the needs of this laboratory. Two of our field-workers have been trained at Cold Spring Harbor. Copies of all social case histories are submitted to the Eugenics Record Office.

J. Harold Williams, *Director.*

AGE DISTRIBUTION.

According to the Census of 1920, the age distribution by per cent. of the population of the United States was as follows:

Under 5 years	10.9
Under 1 year	2.1
5 to 9 years	10.8
10 to 14 years	10.1
15 to 19 years	8.9
20 to 44 years	38.4
45 yrs. and over	20.8
18 to 44 years	41.9
21 yrs. and over	57.6

EUGENICS IN NEW ZEALAND.

Miss L. Macgeorge, Hastings, New Zealand, Founder and Hon. Organizer of the Cause for Promoting Eugenics in New Zealand, states the following particular objects of the organization:

1. (*a*) To promote research work in Heredity and Eugenics.

(*b*) To found a N. Z. Laboratory for National Eugenics.

2. To promote the study of the publications of the Eugenics Laboratories, and of other leading eugenists.

3. To spread a knowledge of the Laws of Heredity so far as they are surely known, and so far as that knowledge might affect the improvement of the race.

4. To set forth persistently the National importance of eugenics in order to modify public opinion, and to create a sense of responsibility in the respect of bringing all matters pertaining to human parenthood under the domination of eugenic ideals.

5. To further eugenic teaching at home, in schools, and elsewhere.

Brief History of the Eugenics Movement in New Zealand, by L. Macgeorge, Founder and Hon. Organizer.

After many years spent (by the Founder) in work for the moral and other betterment of humanity and of youth specially up to 1908, and after much correspondence with the Hon. Sec. of the Eugenics Education Society, London, and after interviewing a very large number of leading citizens (Dunedin), and securing the coöperation of a chosen few, the N. Z. Branch of the London Society was formed, in Dunedin, in June, 1910. During the following year a small society was formed independently in Wellington.

A great deal of work (other than research) was done, which, because we, at that time, had not grasped the fundamentals of the science of eugenics, bore little fruit. Yet, in regard of such representation as we were able to make, practically every scientist, medical man, educationist, clergyman, legislator, civilian, interviewed in the towns in which the work of the organizer lay, expressed his sympathy. Also on every occasion on which measures of eugenic bearing were laid before the N. Z. Government, we found its ministers willing, and more than willing to respond to them. Abundant evidence of the country's "ripeness" for the promotion of eugenics was afforded.

In June, 1912, I commenced extension and organization of the movement throughout N. Z., taking, at the same time, every opportunity for visiting government and other institutions for defectives and delinquents, in order to become further acquainted with the condition of human affairs in its relation to eugenics. By the end of that year it had become fully evident to me that we could make no solid or systematic progress in that subject until we had a N. Z. laboratory for national eugenics—governmental and attached to university.

The founding of that laboratory—together with preparation of "Eugenic Lectures for Youth"—has ever since been the one object of my endeavor; its chief handicap being, as always, the necessity for stealing from the forces needed for that endeavor the time for the collecting of the funds for maintaining the whole movement (a trained eugenist, willing to act as honorary finance agent, not having been found). 1913–1920 was a period of severe nervous break-

down for the organizer, when no amount of desire could equip her physically for the work, though several efforts, less or more successful, were made. All other eugenic activities in N. Z. ceased during that period.

To the extent that health would allow, much of 1921 has been spent in devising and organizing an entirely new movement—a single N. Z. "Society for promoting eugenics," engaging the services of

(*a*) Our leading biologists, psychologists, ethnologists, doctors, breeders, judges, clergy, philanthropists, educationists, supervisors of defectives and of delinquents, legislators—each of whom agrees
  (1) to study, each year, a given number of the publications of eugenics laboratories,
  (2) to specialize in some branch of eugenic research,
  (3) and (or) to collect or donate annually certain funds for the furtherance of the movement and for the founding of the laboratory;

(*b*) engaging also, as a Board of Advisers, as many "specialists" of other countries as are willing to guide and to aid us;

(*c*) and also our "specialist" from abroad to act as (salaried) supervisor of the (prospective) laboratory—this for a period of one year or more according to arrangement.

In regard of eugenic education of youth,—the importance of which, and the right ministration of which cannot be overestimated—the organizer has specialized in methods of presentation of eugenics during twelve years. She hopes, so soon as the laboratory is founded, to devote her time largely to this phase of the work.

As to eugenic education of the public—each editor of daily newspaper interviewed has expressed his readiness to reserve a column for eugenic matter as supplied by the Society, monthly, and probably weekly.

The readiness with which practically every intelligent citizen, among those being interviewed daily, espouses the claims and objects of the Society, affords abundant evidence of the ripeness of the country for those objects. The prospects of the whole movement are most hopeful, though still somewhat handicapped by the tedious nature of the recovery of the organizer's health. Since the objects of the Society aim at not only the betterment of the race, but benefit to every citizen of the country, and since scientists and others are, entirely without reward, giving of their best to promote those objects, it well behooves every citizen to discharge to its utmost his share in making those objects financially possible.

Address of Hon. Organizer—
Miss L. Macgeorge, Hastings, N. Z.
Address of Hon. Treasurer—
E. H. Williams, Esq.
(Messrs. Logan, Williams, White, Sols.), Box 4, Hastings.

BLOND ESKIMOS.

Stefansson's discovery of blond Eskimos is challenged by Diamond Jenness (in *Amer. Anthropologist*, July, 1921), who had lived among them for two years, as ethnologist of the Canadian Arctic Expedition. "Neither the color of the eyes, nor the color and shape of the hair, nor again the complexion of the Copper Eskimos, differentiated them in any way from the other branches of the race, or lends any support to the theory of . . . European admixture." The cephalic index tends to show that the race is pure Eskimo.

WAR AND THE CIVILIAN BIRTH-DEATH RATES IN EUROPE.

"During the war there was a rapid decrease in births, which reached its climax in most cities in 1918. At the same time there was an increase in the number of deaths, even when the military deaths were excluded from the calculations. This increase of deaths over births resulted in a steady decrease in population during the war period in virtually every city for which statistics are available. As a rule, this decrease was more marked in large cities than in small, and greater in small cities than in the rural districts. In 1919 and 1920 there was a general rapid decrease in the death rate, and at the same time a remarkable increase in births. In the country districts and smaller cities the annual decrease of population gave place to a natural increase, which approached the normal as early as 1919; but in the large cities the decrease still persisted, according to the latest figures available, those from 1920. . . .

"It is to be expected that in 1921 the birth rate in Vienna, for the first time in seven years, will again show the so-called natural excess, just as occurred during 1920 in the smaller cities in the same territory. The increase of births is not limited to central Europe, but is seen in western Europe as well. Thus, France since the armistice has shown a most remarkable increase in births, so that for the first time in many years there has been an appreciable annual increase of from 4 to 8 per thousand inhabitants in the French population, compared with a prewar increase of less than one."

A. C. Burnham, M.D., in Jour. of the Amer. Med. Assn., February 11, 1922,

THE NEW INDIAN POLICY.

The Fifty-second Annual Report of the Board of Indian Commissioners dated September 1, 1921, states that it is supporting the so-called "new declaration of policy" which the Government began on April 17, 1917. "The central idea of this pronouncement, which also was in the nature of a bureau order, was found in its first rule which directed that to all able-bodied, adult Indians of less than one-half Indian blood, there should be given, as far as might be under the law, full and complete control of their property. . . .

"The result of the new policy and its subsequent order was that since 1917 nearly 20,000 fee patents have been issued, and that same number of Indians, who had been Government wards, became full citizens of the United States and the unrestricted owners of their property."

The general policy of the nation appears to be to attempt to educate the Indians to the point of competency so far as management of their property is concerned, then to allot their property, to grant citizenship, and to throw the individual Indians on their own resources like all other citizens. After this is done and the alloted property finds its level, by being lost by the spendthrift individuals and secured by the thrifty ones, the Indians will have to shift for themselves according to their several individual hereditary endowments.

HEREDITARY THYROID DISORDER.

A father at 40 years is very nervous, pulse 108, apparently suffering from thyroid disorder. Of his four sons three have marked myxœdema (due to thyroid disorder). Vallery-Radot in citing this case of his concludes that heredity is one of the principal causes of thyroid affections. (*Lancet*, 1922, pp. 24–6.)

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HEREDITY OF MAJOR HIGGINSON.

Henry Lee Higginson, b. in New York City, November 18, 1834, spent his later childhood in Boston, went to Europe at 17½ years for a year of lectures and music, because weak eyes did not permit continued study at Harvard. Again studied music in Europe when 22 to 26 years old. Entered Civil War in 1861 and was incapacitated in action at Aldie, Va., June, 1863. After failures in the oil fields and in cotton planting he entered his father's firm of Lee, Higginson and Co., of Boston, at 33 years, and remained in it until his death. He grew wealthy in the stock brokerage business and private investments, but gave away a large part of his income in hundreds of benefactions of which the largest was his support for over 35 years of the Boston Symphony Orchestra. He made gifts of land (soldiers' field) and a club building to Harvard College During the World War he was an active propagandist for preparedness. The entrance of the United States into the war greatly affected his polyglot (largely German) orchestra, continued support of which his failing health obliged him to relinquish. He died November, 1919.

Higginson was, first of all, possessed of a keen sense of music. At 12 years he writes of his aunt's music box; at 17 to 18 he steeped himself in the opera in Europe and in the next few years concluded that music was his main interest in life; but a permanent injury to his arm prevented him from becoming a professional musician. This prime interest determined the Symphony orchestra, as a similar interest led his cousin Francis Lee to organize an Oratorio Society in Salem. Henry's musical capacity is especially a Lee trait; his mother was a lover of music (p. 13).

Higginson was fond of giving. In his earliest letter (at 11 years) he writes his brother that he has received 2 sticks of candy which he is forwarding to his brother. At Paris, when 19, he shopped industriously for gifts to bring home. Like his father he remembered anniversaries of every kind and wrote messages of remembrance. In addition to his gifts to Harvard he founded a Harvard fellowship at Princeton, and gave to a multitude of other colleges. He gave so much to individuals and causes as almost to impoverish himself. As his uncle said: "You are full of benevolence inherited from your father and mother." He gave of his friendship, especially to men. "To his true comrades he was like a lover." Hence his gift of land to commemorate his soldier friends, and his fondness for social clubs. Higginson had the family honesty, in act and speech; traditions which were the basis of his financial success in the brokerage business. Higginson had a mercurial cyclothymic Lee temperament, generally lively, even explosive, sometimes somber; and a certain shyness such as his mother's father had. Indiscriminate praise pained him so that many of his gifts were secret; he shunned public speaking and was no orator; but his terse soldierlike phrases and his strong emotions and life-long convictions made his speeches interesting and effective.

Bliss Perry: 1921. Life and Letters of Henry Lee Higginson. Boston: Atlantic Monthly Press. 557 pp.

OUTLAW AND FRIEND.

Al Jennings was born in Tazewell Co., Virginia, Nov. 25, 1863, while his mother was fleeing from her burning home,—a sacrifice to war. He lost his mother when about 10 years old; and shortly thereafter left his drunken father, becoming a nomad. At 11 he shot at a man, while in a fit of passion, wandered with tramps and became a cowboy. At 14, he killed a man who had murdered his friend. Three months later he got drunk, shot up a saloon, killed the proprietor and was imprisoned but later released to his father's custody. Four years later he had finished a law course; but in Oklahoma, when his brother was murdered, he became an outlaw. He helped rob a train twice, and, with $30,000, escaped to Honduras. There he met William S. Porter (O. Henry) with whom he was long associated. At a dance in Mexico City he killed a Spanish-Mexican to save Porter's life and both fled to California where, after breaking a bank, he was caught and sent to the Ohio penitentiary for life. Here O. Henry was later incarcerated. Pardoned by President McKinley, he took up the practice of law in Oklahoma and was restored to citizenship by Roosevelt.

Jennings was a criminal. What made him such? First of all was a feebleness of inhibition. There was insufficient rein on his instincts; to resent was sometimes to kill. There was, deep down in his nature, a desire for self-assertion, at any cost. The first time he got drunk, he shot up a saloon, "just to let them know I was there." When his drunken father resented Al's attempt to pull him out of his drunken sleep and struck Al, the son resented the act. "I threw myself on the sandbar and beat the ground in a fury of resentment. I was crushed and amazed." When, after he had played in a cheap theater, the manager refused to recognize his services and pay him, the 11-year-old boy fired a pistol at him. Unintended slights by his friend, O. Henry, in New York led him to pack up to leave the city. His feebleness of inhibition made him quick to kill, in self-defense, or to get himself out of a tight place. In accordance with popular traditions this "hair-trigger" temperament was associated in his case with bright red hair. The source of this temperament and their flash-reactions is not told in the book. They came out of the loins of Tazewell Co., Virginia, to whose mountains many of the British convicts sent to Virginia in the eighteenth century retreated.

His love of self-assertion lay at the bottom of his revenge. When those he loved, who belonged to him, were murdered, then he would not rest until his loss was expiated. Jim Stanton, who had befriended him, was murdered; within a year Al had killed Stanton's murderer. Al's brother, Ed, was murdered and the murderers were set free. One resolution now controlled Jennings—kill the murderers. The attempt finally brought him to the penitentiary.

The lack of inhibitions was accompanied by an ability of self-expression, a genial output of affection, that made Jennings beloved by those who craved friendship, whether on the ranch, at a dance in Galveston, exiled in Mexico, in the state penitentiary, in New York City with O. Henry. This genial capacity for affection secured his release from confinement and his subsequent success in business. It was in his father also, who was living as a pauper, and put up his doctor's shingle. "His reputation grew and he became quite a figure in the town—was elected

district attorney." Later in Oklahoma he was appointed judge.

With something of a nomadic tendency, with an early loosening of home ties, with feeble inhibitions and strong, primitive, basal instincts of self-esteem and of fight often made obvious by drink; with an ease of expression of words and of affection, a boy reared with the roughest of men would tend to have an output like that of Al Jennings.

Al Jennings: Through the Shadows with O. Henry. N. Y.: H. K. Fly Co. 320 pp.

BEAUTY AND THE RACE.

Darwin's work on "Sexual Selection in Man" has had many successors. There has just been published by the Professor of Experimental Psychology in the Johns Hopkins University a small book on the same subject. The author considers that beauty has a vast eugenics significance and develops this theme. He thinks that stature is of prime importance. He discusses also features, hair, fat, complexion, muscular tone and poise. The author considers also inbreeding and incest and the selection of male parents.

There is a good deal of unfounded "opinion" expressed in the book, but it is an interesting, if not profound, exposition of the author's contemplation on one of the most important (if widely tabooed) of human interests.

K. Dunlap, 1920: Personal Beauty and Racial Betterment. St. Louis. Mosby. 195 pp. $1.00.

MARITAL CONDITION OF THE POPULATION.

Marital relation is an important eugenical factor. Ignoring, for the time being, the matter of illegitimacy, marital status measures legally the reproductive portion of the population. This is further limited to the married persons within the reproductive ages, and still further to the fertile couples within this narrowed range, and still further by the actual fecundity of this narrowest group. While all of this is generally important eugenically, it is not of the greatest eugenical significance, unless also the matter of differential fecundity by race, and family stocks classified on the basis of specific talent, is considered.

The statistics of this first limiting element in national reproduction—the marital condition of the population (on January 1, 1920)—were announced by the United States Bureau of the Census on January 26, 1922. This announcement, in part, states:

"The total male population of the United States on the census date, 53,900,431, included 36,920,663 men and boys 15 years of age and over. Of the latter number, 12,967,565 were single, 21,849,266 were married, 1,768,308 were widowed, 235,284 were divorced, and for the remaining 110,240 the marital condition was not ascertained by the enumerators."

"The total number of females in the United States, 51,810,189, included 35,177,515 women and girls 15 years of age and over. Of the latter number, 9,616,902 were single, 21,318,933 were married, 3,917,625 were widowed, 273,304 were divorced, and for the remaining 50,751 the marital condition was not reported. The difference of 530,333 between the numbers of married men and of married women was due principally to the presence in the United States of many foreign-born married men who had left their wives in the countries of their former residence."

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May 1922.

ACCESSIONS TO ARCHIVES OF THE EUGENICS RECORD OFFICE, APRIL, 1922.

Genealogies, 5.

Records of Family Traits, 4.

Individual Analysis Cards, 3.

ANNUAL MEETING OF THE EUGENICS RESEARCH ASSOCIATION.

The tenth annual meeting of the Eugenics Research Association will be held on June 10th at the Eugenics Record Office, at Cold Spring Harbor, Long Island. It is suggested that members leave Pennsylvania Station, New York, at 9:09 A.M., arriving at Cold Spring Harbor at 10:24. They will be met and conducted to the place of meeting. During the noon recess, lunch will be served. At the close of the program and business meeting, the visiting members will be escorted to the 4:46 P.M. train, which arrives at Pennsylvania Station at 6:02.

The following program is announced:

President's Address—Heredity and the Endocrine Glands. Dr. Lewellys F. Barker.

1. The Endocrinopathic Background of a Psychoneurosis. Dr. Edith R. Spaulding.
2. Endocrine Therapy in Feeblemindedness. Dr. H. W. Potter.
3. The Effects of Vasectomy. Dr. Harry Benjamin.
4. The Mental Health of 468 Offspring from Dementia Præcox Stock. Dr. Myrtelle M. Canavan.
5. Eugenics and Crime Prevention. Honorable Harry Olson.
6. The Intermixture of Races and Disease-frequency in Hawaii. Dr. Frederick L. Hoffman.
7. Lethal Selection in War. Prof. H. R. Hunt.
8. Modern Methods in Selecting Very Bright Pupils Here and Abroad. Dr. Paul R. Radosavljevich.
9. Eugenics and the American Genetic Association. Dr. David Fairchild.
10. The Institutional Social Worker with Special Reference to Family History Study. Dr. Aaron J. Rosanoff.
11. Normal Changes in Body Build During Development. Charles B. Davenport.
12. The Importance of the Work of the Bureau of Deportation from the Standpoint of Eugenics in America. Dr. Spencer L. Dawes.
13. Deportation Systems of the Several States. Harry H. Laughlin.

With the exception of the presidential address, papers will be limited to fifteen minutes.

Besides the formal papers, members of the Association will be given an opportunity to explain the nature of their investigations during the past year.

Also, there will be a business meeting which will hear the reports of the Treasurer and Auditor, will act on the recommendations of the Executive Committee, will elect officers for the year 1922–1923, and will transact other business offered by members.

Program Committee: H. H. Laughlin, *Chairman*, C. B. Davenport, A. J. Rosanoff.

CZECHISH EUGENICS SOCIETY IN PRAGUE.

The officers in this organization are:
President—Prof. Dr. Lad. Haškovec.
Vice-President—Prof. Dr. Vlad. Ružička.
Secretary—V. Bergauer.
Treasurer—Prof. Dr. Drachovský.

THE TRAINING CORPS, 1922.

The thirteenth session of the Training Corps for eugenical field investigators will be conducted by the Eugenics Record Office, at Cold Spring Harbor, Long Island, New York, from June 28 to August 9. The demand for trained investigators is constantly increasing, so that it is probable that all qualified persons who finish this course will be sought after for employment as field investigators early in the fall.

REFERENDUM IN OREGON.

At the special election of June 7, 1921, the so-called "Hygienic Marriage Examination and License Bill" was rejected under referendum by vote of 56,858 for the measure and 65,793 against it. The official statement described the purpose of the bill as follows: "To require both applicants for marriage license to submit to and pass an examination by a regularly licensed and competent physician as to their health, in regard to contagious and communicable venereal disease and mentality, and in case of failure to pass such examination prohibiting marriage unless one or both applicants are rendered sterile; to establish requirements of physician's certificate and providing for an appeal from order of country clerk denying a license."

TRAINING CORPS MEMBERS.

Mrs. Clara Pond Richards, '13, has a son, Theodore Dwight Richards, Jr., born January 9, 1922.

Dorothy W. Caldwell, '18, has a position in the Highland Hospital, Rochester, New York, which gives her an opportunity to carry on some independent investigations.

Bess Lloyd, '21, of the Department of Anatomy, School of Medicine, Washington University, St. Louis, Mo., has begun a series of studies on Inheritance of Goitre and Associated Traits.

John T. Illick, '14, announces that after six years in China, he and his family will sail on the "Hoosier State" June 24th for their first furlough. During his furlough his home address will be Hulmeville, Pa. Mr. Illick announces also the birth of a son, Paul Edward, born January 5, 1921. In reference to his work, he states that the students in the University of Nanking are greatly interested in genetics and eugenics, and that three of them are working on the Record of Family Traits.

FACILITIES FOR BIOLOGICAL RESEARCH IN VIENNA.

The "Biologische Versuchsanstalt der Akademie der Wissenschaften" at Vienna (Austria, II Prater, Vivarium) wishes to let tables to students of experimental biology (fee per month 100 francs, or five pounds, or 20 dollars or 100 c.K.). Special research is being done on: Developmental mechanics, regeneration of plants and animals, deplantation and functional transplantation of developed animals, anisophylly, etiolation, production of fat by plants, plant-immunity, modification, pigmentation, adaptation in animals, physiology of sex and rejuvenescence of animals and plants.

THE GENETIC FOUNDATION.

There has been recently organized in Colorado "The Genetic Foundation." An interested and philanthropic individual has contributed $1,000 to start a sustaining fund for such a foundation with the hope that other contributions will be made from time to time as the work of the foundation progresses. The directors of the foundation are: Dr. C. P. Gillette, head of the Experiment Station, Colorado Agricultural College, Fort Collins president; Dr. T. D. A. Cockerell, head of the zoölogy department, University of Colorado, Boulder, vice-president; Mr. Henry W. Toll, attorney, Denver, secretary-treasurer; Ellsworth Bethel, president of the Colorado Academy of Sciences; Dr. Ira A. Cutler, head of the biology department, University of Denver; Dr. Ralph J. Gilmore, head of the biology department, Colorado College; Dr. Clarence B. Ingraham, professor of obstetrics, University of Colorado. The work of the Foundation will be chiefly researches and propaganda that have a direct bearing upon human heredity and betterment.

SOCIAL WELFARE IN ITALY.

Under the direction of Professor Ettore Levi, there has recently been organized in Rome the Italian Institute of Hygiene, Prevention and Social Relief, the address of which is Via Condotti 33, Rome. Professor Levi writes that the new Institute will concern itself with the physical, moral and economic welfare of the nation, that "the details of the activities of the Institute have been established, and its organization is already at work, the initial funds having been provided by the generosity and foresight of a well-known business firm of Genoa, while the collaboration and support of the principal banks of Italy has been promised for a period of three years." Besides the anti-venereal work which will constitute its principal activities, the Institute will make an effort to serve as a "center of study and experiment for new types of social work. Among these are suggested vocational laboratories, through whose skilled advice the laborer may undertake work suited to his powers and capacity; schools of training for social workers, a class hitherto unknown in Italy."

THE POPULATION OF ALASKA.

Alaska has been peopled by persons who move readily from place to place. This, together with a variation in her attractiveness to the adventurer, has caused the great fluctuations in her total population, which in 1900 was 63,592, in 1910, 64,356 and in 1920, 55,036. There has, however, been a stabilization in the Territory's population which is reflected in the continually approaching balance in the number of males to 100 females. In the total population this ratio has moved as follows: In 1900, 258.9, in 1910, 247.9, in 1920, 168.5. Among the Indians the ratio between the two sexes has been of the normal sort, but among the whites, to 100 females, there were in 1900, 852.9 males; in 1910, 500.1; and in 1920, 282.1. Industrially, eugenically and socially, the great need of the territory is settlers who move into the region with their families. Perhaps the distribution of age groups with sex-ratios indicate the approaching stabilization of the Territory's population. In 1920 the sex-ratios by age groups were: 40 and more years of age, 304.5 males to 100 females; 20 to 39 years of age, 171.1 males to 100 females; under 20 years of age, 100.7 males to 100 females.

NATURAL IMMUNITY OF WILD RATS TO PLAGUE.

Reprint No. 709, from the Public Health Reports of the United States Public Health Service, describes the experiments conducted by R. R. Spencer, Passed Assistant Surgeon, United States Public Health Service, during the fall of 1920 at the plague laboratory at Pensacola, Florida. "Cutaneous inoculations with plague, of 57 rats from a non-infected territory, showed 43.8 per cent. to be immune. Subcutaneous inoculation with plague, of 377 rats from a non-infected locality, showed 30.2 per cent. to be immune. A total of 434 rodents from a non-infected locality showed 32 per cent. to be immune."

The conclusion reached is that "a very considerable percentage of the wild *M. norvegicus* from a non-infected locality has been found to be immune to plague."

HUMAN THOROUGHBREDS.

Charles F. Dight, M.D., of Minneapolis, has issued a small pamphlet under the title: "Human Thoroughbreds—why not?" He promises that this is the forerunner of a book on eugenics. This will be awaited with interest. The pamphlet tells of his "plan to make Minneapolis a center for the study and promotion of advanced knowledge of eugenics."

It is quite clear, to one who reads between the lines, that Dr. Dight is the "unnamed Minneapolis man" who has left his estate in trust to secure the desired results. The purposes of the fund are stated to be: To inform the general public by various educational means about the laws of heredity; to teach eugenics; to give instruction in psychology, with special reference to vocations, and to provide a place for consultations and eugenic advice.

CITIZENSHIP OF FOREIGN-BORN WHITE POPULATION.

The blending of races takes place whenever and wherever two races come in contact regardless of nationality or citizenship. But the matter of naturalization of aliens is a factor in the rate of social assimilation. When an alien becomes naturalized he casts his lot with the new country and thereby is more apt to come within the range of mate selection covered by the main population of the country. Among white races in the United States, regardless of nationality, racial assimilation follows rapidly the process of political naturalization, and the acquiring of the English language.

On January 12, 1922, the Bureau of the Census issued a statement showing the citizenship status of foreign-born white population 21 years of age and over, by country of birth. It says:

"The total foreign-born white population of the United States, which numbered 13,712,754 in 1920, included 12,498,720 persons 21 years of age and over, of whom 6,208,697, or practically half, were naturalized. Wide differences in citizenship status appear among the natives of the various foreign countries, the proportions naturalized among those 21 years of age and over ranging from 74.4 per cent. for the Welsh, to 5.5 per cent. for the Mexicans. For the five countries which contribute numbers of immigrants, the percentages naturalized were as follows: Natives of Germany, 73.6; of Ireland, 66.1; of Russia, 42.1; of Italy, 29.8; and of Poland, 28.9."

"Of the total white population 21 years of age and over, 22.7 per cent. were immigrants and 11.3 per cent. were naturalized immigrants. Thus in the white population of voting age, there were 166 naturalized immigrants to every 1,000 natives."

GERMANY AND FRANCE.

According to recent newspaper dispatches, the figures for the first half of 1921 show an excess of births over deaths in France of 72,851. For the same period Germany shows an excess of 358,712 (for the first three months of 1921 the German figures were 179,356. This figure was doubled for the six months' estimate). Germany has a population one and three-quarter times that of France, but has five times the increase in population. (Abstract from the *N. Y. Times*, February 26, 1922.)

"KITH AND KIN."

Dr. Alexander Graham Bell, in the October, 1921, issue of the *Journal of Heredity*, presents a paper on the subject of "Kith and Kin" in which he says:

"In dealing with genealogical subjects I am much surprised at the poverty of the English language in words expressive of relationship. We have no general term, irrespective of sex, for the relationship indicated by the words 'uncle and aunt,' nor have we any other word than 'cousin' to express collateral relationship, and we use the term in the most vague way.

"We often allude to our 'kith and kin.' We all have a pretty definite idea of what we mean by 'kin,'—relationship through a common ancestor, our own kindred, our blood relatives; but what do we mean by 'kith?' The word by itself is obsolete. Webster defines it as 'acquaintance, intimate acquaintance and relationship.' I think it would be a good plan to revive the term 'kith' and give it the special meaning of relationship through a common descendant. Kin: Persons who have a common ancestor are kin. Kith: Persons who have a common descendant would be kith."

DR. ALBERT GOVAERTS OF BELGIUM.

Dr. Albert Govaerts, who is Secretary of the International Eugenics Commission and of the Société Belge d'Eugénique, and who has been carrying on eugenical researches at the Eugenics Record Office since September, 1921, finished his American studies early in April, and thereafter visited eugenical and medical centers in New York City, Princeton, Philadelphia, Baltimore, Washington and Boston.

Dr. Govaerts' principal studies while at Cold Spring Harbor consisted of investigations into "The Hereditary Factor in the Etiology of Tuberculosis." His paper under this title will be published in the *American Review of Tuberculosis*. The statistical tables which he compiled are on file at the Eugenics Record Office, and those which are not printed with the manuscript may be consulted by persons especially interested in them.

On his return to Belgium, Dr. Govaerts will seek both private and governmental support in organizing an Eugenics Record Office for the Kingdom of Belgium. He sailed for Antwerp from New York City on the "Kroonland" on May 6th. His permanent address will be: 82 Rue de l'Ermitage, Ixelles-Bruxelles, Belgium.

MENDEL CENTENNIAL.

A call has been issued for the celebration of the centennial of the birth of Gregor Mendel, to held at Brünn, Sept. 22d–24th. The celebration will be in the garden where stands the monument to Mendel that was erected by subscriptions made by geneticists in 1910. A special invitation is extended to Americans to participate. Professor Dr. Hugo Iltis of 10 Bäckergasse, Brünn, Tschechoslowakei, has the matter in charge.

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ON THE PRESENT STATUS OF THE INHERITANCE OF THE BLOOD GROUPS.

DR. FREDERICK L. REICHERT,

Johns Hopkins Hospital.

The variety of influences that may set free the hemoglobin from the red blood corpuscles are termed hemolysins. Likewise corpuscles agglutinate under a variety of influences, and these agglutinating factors are called agglutinins. The normal human blood serum contains iso agglutinins and iso hemolysins, that is, a variety of agglutinins and hemolysins, occurring naturally in the serum, which are effective against the red blood cells of another individual. These anti-bodies, as they are sometimes called, are important in connection with blood transfusion, and it is necessary, before using a donor, to make sure that his serum does not agglutinate or cause hemolysis of the corpuscles of the patient, and vice versa. Curiously enough, according to their possession of these so-called iso anti-bodies, human beings fall into four groups which are believed to be inherited according to Mendelian laws.

Moss (1) in 1910, independently of Jansky, found that there are at least three different iso agglutinins occurring in the serum of over 90 per cent. of adult human beings, and three iso hemolysins in about 25 per cent. of adults. He divided human beings into four groups, according to the ability of their serum to cause iso agglutination and of their corpuscles to be iso agglutinated. The serum of members of any one group will not agglutinate or hemolyze the corpuscles of other members of the same group, but will agglutinate and may hemolyze the corpuscles of members of any other group except those of Group IV. A table of this relationship is shown.

SERA.

CORPUSCLES	Group	I	II	III	IV
	I	0	+	+	+
	II	0	0	+	+
	III	0	+	0	+
	IV	0	0	0	0

Group III is the rarest, with Group I but little less infrequent, while Group II and Group IV are about equally common, each occurring in about 40 per cent. of individuals.

Moss, in a later article (2), gives a simplified method of determining the group of an individual by testing his corpuscles against known Group II and Group III serum, as illustrated by the accompanying table.

CORPUSCLE TEST AGAINST KNOWN SERUM.

Corpuscles	Serum		Group to which belongs
	Group II	Group III	
X	+	+	I
X	0	+	II
X	+	0	III
X	0	0	IV

In the tables + represents agglutination, and 0, no agglutination.

Group II and Group III serum may be kept on hand in the laboratory ready for use, sealed in capillary pipets. It is then necessary only to get

a single drop of blood in salt solution for corpuscles in order to determine the group of an individual. Moss gives the details and simple technic for securing the sera and for doing the determination in a hanging drop, the latter requiring only a few minutes to set up, and the presence or absence of agglutination is observed under the microscope.

A Mendelian interpretation was recently suggested by Hirschfeld and Hirschfeld (3) to the classification of human sera in the four groups although Von Dungern and Hirschfeld (4) in 1911 considered its familial tendency.

J. R. Learmonth (5) in 1920 published an article on the inheritance of specific iso agglutinins in human blood in which he bases his interpretation upon the conclusions of Landsteiner (6) that there are at least two kinds of agglutinins present in the serum of his cases which he had divided into three groups, the one in his so-called Group A, the other in Group B, and both in Group C. Moss (1), however, in 1910 showed that there were really three agglutinins, the third being different and not composed of the effects of the two others. Learmonth, using Landsteiner's postulation of only two kinds of agglutinins, proceeds to analyze the investigations he has made in forty families but his tables and statistics cover only two generations and the attempt at the determination of a duplex or simplex possibility is quite inconclusive, being based on what seems to be a faulty premise. He concludes that it is permissible to deduce that the iso agglutinins present in human blood are inherited and that as a general rule the inheritance follows Mendelian laws.

Ottenberg (7) in a recent paper on the medico-legal application of human blood grouping states that in 1908 he noticed that the groupings were hereditary and followed Mendel's law, but was unable to work out the mechanism of inheritance. He, too, uses Landsteiner's postulation of two different agglutinins and employing Jansky's classification of the four groups (which differs only from Moss' classification in that his Group I corresponds to Moss' Group IV, and vice versa) he proceeds to develop an elaborate mechanism of inheritance, which, however, seems only a hypothesis not based on any field studies as far as can be ascertained from the article, and in which no definite consideration is taken of the hypothetical possibilities arising from matings of hybrids.

Buchanan (8) in a subsequent number of the same journal rightly attacks Ottenberg's paper for advocating the application of blood grouping in medico-legal cases where there is disputed paternity or maternity or of alleged substitution of one child for another, without further investigations into its inheritance. He shows the great necessity for further field studies and these to be carried to three generations.

It appears then, as in a number of other subjects, for instance, the endocrinopathics, that conclusions have been arrived at, and applications made, without sufficient investigations and it is quite evident that although the investigations made are quite suggestive and important, there still remains a need for a thorough and extensive field study, carried beyond two generations. Then, with the data findings, a more authoritative and convincing hypothesis as to the mechanism of the inheritance of blood grouping could be advanced.

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THE SEX FACTOR.

The comparative knowledge of the biologist is essential to a proper understanding of sex. Hence is to be welcomed a book on sex in society by a zoölogist. The job has been done well. The essentially normal nature of the sex impulse is clearly stated. In considering the topic of sex control we do not think the author so happy. Control of the sex instinct is no less biological, no less *animal*, than exercise of the sex instinct. Just as *to kill* a furry animal is the instinct of the fox terrier, yet also *not* to kill her pups or the pet household rabbit, so not to exercise the sex instinct on sibs and children is normal and biological in man (as well as some lower animals). The normal man is provided with a perfectly good mechanism for inhibiting his sex impulse, when it is desirable that it should be inhibited. The trouble is that some persons have abnormally weak inhibitory mechanisms, just as some animals have, when they eat their young. Also, as a nervous, excitable, imaginative animal the sex impulses of the normal man are often too strong for the inhibitions. The problem of sex-control is that of development of the inhibitions where they are present but weak; of pitting some other emotion against that of sex, where sex-inhibitions are practically absent; and of the protection of adult humans from overstimulation at inopportune times.

T. W. Galloway. 1921. The Sex Factor in Human Life. N. Y. Amer. Soc. Hygiene Assn. 142 pp.

THE MAKING OF A CHEMIST.

The makers of chemistry were as varied as people of other professions are. Some were genial, like Ramsey, others sarcastic, like Priestley; some hyperkinetic, like Liebig, others hypokinetic, like Crookes (p. 231).

Of the earlier investigators in chemistry a striking number were of the nobility or of the office-holding class—suggesting that those of this class either had especially the leisure or the inclination to do research in chemistry. Thus Boyle was son of the Earl of Cork, Cavendish was the grandson of two Dukes, Cannizzaro the son of a minister of police and of the daughter of a noble Sicilian house. On the other hand, especially in more modern times, were Davy, the son of a farmer and wood carver, Dalton, the son of a handloom weaver, Faraday, the son of a blacksmith.

The hereditary elements are more obvious in the case of Ramsay the son of a line of *dyers* on his father's side and of a geologist on his mother's; of Liebig, the son of a color manufacturer; of Berzelius, the son of a school principal. Natural inclination combined with leisure, appropriate hereditary tastes combined with environment, afford the best combination for the making of a chemist.

W. H. Tilden. 1921. Famous Chemists. The Men and their work. N. Y. Dutton. vi + 296 pp., portraits. $5.00.

GENERAL ARTEMAS WARD.

Artemas Ward was born at Shrewsbury, Mass., Nov. 27, 1727, the product of a consanguineous mating. He grew up as a country boy in a family of six, entered Harvard College in 1744, was graduated 1748, taught school for a year, married Sarah Trowbridge, a granddaughter of Rev. Increase Mather, opened a general store at Shrewsbury and in 1751 became justice of peace and tax assessor, remaining in public office during practically all of the rest of his life. In 1757 he was elected representative of the town to the "General Court," sitting in Boston. He served in the war against the French, was commissioned major in 1757 and the next year, Colonel. He took a prominent part in resisting the British plans of taxation without representation, and became persona non grata to the Governor of the colony, but was elected to the Governor's council despite the Governor's protest. Ward was sent to the first and second provincial congresses. After the battles of Lexington and Concord, Ward was made commander-in-chief of the army besieging Boston, and he arranged for the fortifications on Charlestown neck which led to the battle of "Bunker Hill." When Washington was made commander-in-chief of the American forces Ward was commissioned First Major-General and remained in immediate charge of the siege of Boston until the British sailed away. On account of ill health he then resigned. Ward was elected to the second and third sessions of Congress. He died Oct. 31, 1800.

Ward was an example of the best of the Colonial type in New England; possessed of an excellent understanding, of inflexible integrity, dogged adherence to his opinions, and unquestioned acceptance of the New England religion. He was a man of few words and these always much to the point. He had an hereditary capacity for social organization. His father was a judge in the Court of Common Pleas and a colonel of the colonial army fighting the Indians. Artemas Ward was strongly inhibited. His record at College was clean; and as storekeeper and farmer his reputation for honesty introduced him, at 23 years, to a long public service. He was industrious and willing to assume responsibility and he served as selectman, town clerk, assessor and justice of the peace all at one time. His good judgment was everywhere conceded and more even than Washington's brought about the evacuation of Boston. His courage is illustrated by the story that in opposing the soldiers of "Shay's Rebellion" who were trying to prevent the judges from attending their duties at the courthouse, Ward stood firm even when the rebels' bayonets pressed on his breast and penetrated his robe. Ward's conscientiousness was shown by his rising from a sick bed to assume command of the army after the Concord fight and his unceasing reconnoiters on horseback though painfully afflicted with "gravel." Such industry, intelligence, stubborn integrity and matchless intrepidity naturally made him a leader.

Charles Martyn. 1921. The Life of Artemas Ward. N. Y. Artemas Ward. xiii + 334 pp.

MOTHERS' PENSIONS LAWS.

Up to a certain point in economic welfare, economic ease promotes racial fecundity. Thus the matter of mothers' pensions laws is one of great eugenical concern. It means that increased fecundity and infant survival will take place in that economic level just above the dependent classes and just below the self-supporting middle class. In Bulletin No.

16, "State Laws Affecting Working Women," of the Federal Women's Bureau, issued under date of July 1, 1921, Mrs. Mildred J. Gordon, industrial research assistant, says: "Forty States and two Territories (Alaska and Hawaii) have mothers' pensions laws. Only eight States—Alabama, Georgia, Kentucky, Mississippi, New Mexico, North Carolina, South Carolina, Rhode Island—have no laws granting aid to needy mothers. There are almost as many classes of women entitled to pensions under these laws as there are States having such laws. Five States—Florida, Minnesota, Wisconsin, North Dakota, and Missouri, outside of Jackson County and St. Louis—have laws broad enough to include grandmothers, or stepmothers, or women other than their mothers, on whom children are dependent. Colorado alone provides for giving a pension to needy parents—i.e., mother, father, or mother and father. Only two States—Michigan and Nebraska—and the Territory of Hawaii give pensions to needy unmarried mothers; and only three States—Colorado, Missouri, outside of Jackson County and St. Louis, and Pennsylvania—make any provision for expectant mothers. The more recent laws are, in general, more liberal. In contrast, however, to the inclusiveness of some laws, nine States—California, Utah, Arizona, Connecticut, Louisiana, Maryland, New Jersey, Texas, Virginia—limit the payment of pensions to widows only. Moreover, in all the states the actual sums paid to the women are small. Two states—Florida and Nevada—allow $25 per month for one child, but two other states—Delaware and New Jersey—allow only $9 per month and two more states—Iowa and Vermont—allow only $2 per week.

INFANT MORTALITY IN CENTRAL EUROPE.

"With the war, the infant mortality rates increased moderately, but much less than might have been expected, owing in part to the comparatively greater decrease in illegitimate than in legitimate births, and in part to the fact that, there being fewer children to care for, they received proportionally better care. There was a great shortage of milk, and for this reason many mothers nursed their infants rather than resort to the uncertainties of artificial feeding. As a matter of fact, this influence for good was so great that in some localities there was an actual decrease in infant mortality. With the rapid increase in the birth rate following the armistice, there was practically no improvement evident in infant mortality rates during either 1919 or 1920." . . .

"Among older children there appears to be a slight increase in the death rates, as compared with the prewar period. It is quite evident that deaths among children up to 16 years of age have been less during 1920 than they were during 1917 and 1918; but whether they are less than during the prewar period is not so easily determined. It is certain that during the war there was a certain amount of natural selection, with the result that the children today represent the survival of the fittest; and for that reason under present conditions, which are approaching normal, there remains a group which is unusually sturdy and resistant to infection."

"Mass starvation has disappeared, infant health has steadily improved, and older children appear healthier and better nourished than at the end of the war."

Dr. A. C. Burnham in *Jour. Am. Med. Assn.*, pp. 454–6, Feb. 11, 1922.

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MEMBERSHIP STATUS OF THE EUGENICS RESEARCH ASSOCIATION, JUNE 1, 1922.

Active Members	226
Associate Members	222
Supporting Members	11
Patrons	2
	461

NOTES AND NEWS.

Inheritance of webbed toes as a sex-linked character in man is described by Richard Schofield in the *Journal of Heredity* for November, 1920. A pedigree chart is given.

Dr. Arthur H. Estabrook, '10, presented a paper on "The Work of the Indiana Committee on Mental Defectives" to the 1922 session of the American Association for the Study of the Feeble-Minded, in St. Louis, in which he showed the part played by the Eugenics Record Office, especially in Dr. Estabrook's analysis of the "Tribe of Ishmael," in making the committee's survey.

"Reginald G. Harris is organizing an African expedition, of which he will be director. It has the official sanction of the American Field Service Fellowships Formation and will be known as the American Field Service Scientific Expedition to Equatorial Africa 1922. He is an A. F. S. Fellow in France, now studying at the University of Paris, and will be accompanied by another of the Fellows. The expedition will collect entomological specimens and study race types. Harris was a member of the Cornell University Entomological Expedition to South America 1919–20. The African objective is Madagascar, but stops will be made along the Congo river, at Lake Tanganyika and in East Africa. The expedition leaves Paris in June and will be gone several months." (*Brown Alumni Magazine*, May, 1922.) It was during the South American Expedition above mentioned that Mr. Harris collected the material for "Eugenics in South America," which appeared in the March number of the EUGENICAL NEWS.

DENTAL CARIES AND RACE.

Dr. Shafer, dental director of the Standard Oil Company, has gathered and Dr. A. W. Schoenleber of the medical department has sent us data on the dental condition of 2,758 men, classified by nationality. The dental conditions are graded into 4 grades (with certain subdivisions):

Grade 1, Perfect to excellent, 236 or 8.6 per cent. of all.

Grade 2, Serviceable, 804 or 29.2 per cent. of all.

Grade 3, Probationary (16 or less teeth), 1,638 or 59.4 per cent. of all.

Grade 4, Rejected, on account of oral conditions, 78 or 2.8 per cent. of all.

Compared with this standard for *all*, the gradings for some of the better represented nationalities are as follows:

	Italians		Polish		Am. Negroes		Austrian (Jews?)		Irish	
	No.	%	No.	%	No.	%	No.	%	No.	%
Grade 1.....	52	18.6	14	12.1	8	20.5	18	11.0	4	3.2
" 2.....	52	18.6	27	23.3	6	15.4	40	24.4	36	29.0
" 3.....	169	60.4	71	61.2	24	61.5	104	63.4	67	54.0
" 4.....	7	2.5	4	3.4	1	2.6	2	1.2	17	13.7
Total.....	280		116		39		164		124	

These statistics, so far as they go, and assuming that there was no unconscious or conscious selection of the candidates from the different nationalities, lead to the following conclusions: It appears probable that there is a racial difference in resistance to dental caries. The American Negroes and Italians have the largest proportion of perfect teeth. The Polish and Austrians (largely Jews?) rank next and the Irish come last, with the smallest proportion of excellent and satisfactory teeth and the highest proportion of rejection on account of bad teeth. The total of English, Germans, Danish, Norwegian, and Swedish amounts to 99 persons. These are classified in the four classes respectively as 3, 33, 54 and 10 per cent. The rates run only a trifle better than the Irish. Evidently feeble resistance to dental caries is a Nordic trait.

TOOTH CONDITION OF IMMIGRANTS.

Dr. William P. Cook, D.M.D., in the January–February, 1922, number of *The Commonwealth*, published by the Massachusetts Department of Public Health, draws a striking picture of the contrast between the tooth condition of American children and of immigrants. The poor condition of the teeth of the American child and adult is attributed largely to soft food, largely of carbohydrates, and sweets. The splendid physiological condition of the mouth of the immigrant, so far as tooth decay is concerned, is attributed to hard food, dark bread, macaroni, hard goat's cheese, no sweets. The immigrant races were largely Italians, Albanians, Jugo-Slavs, Sicilians, Austrians and Lithuanians. American children and adults, with whom these are contrasted, are largely Nordics. The difference in tooth condition in the two groups must be accepted as a fact, but the biologist wonders whether there is not also a hereditary or racial element present along with the difference in physiological habits.

SIMILAR TUMORS IN TWINS.

The twin sisters of 21 developed each a fibro-adenoma in the left breast, at almost the same time, and in the same part of the breast. The structure of the tumor was alike in both, and both were removed at the same time. (Abs. from *Deutsche Zeitschrift fur Chirurgie*, Leipzig, March, 1922, by *Jour. A. M. A.*, May 27, 1922, p. 1672.)

INTER-STATE MIGRATION.

Intra-national migration is an important factor in racial fortunes. No matter how complex the population, due to immigration and other causes, if the people move freely from one part of the nation to another, a certain amount of race mixture will take place, and thus a national type tends to be established. On the other hand, if small groups of the population tend to remain isolated geographically in states or provinces, then, of course, the unit of mate selection and race mixture, and consequently of the melting pot, is a state or province.

In the United States it is of interest therefore to examine the data of the Bureau of the Census on states of birth of the native-born—the American-born—inhabitants of the different states. Thus the Bureau of the Census announces that on January 1, 1920, "of the 1,380,631 inhabitants of Connecticut, 756,212, or 54.8 per cent., were natives of that state; 245,980, or 17.8 per cent., were natives of other states or of the outlying possessions; and 378,439, or 27.4 per cent., were born in foreign countries. Of the natives of other states, 99,271 were born in New York, 48,133 in Massaschusetts, 15,215 in Pennsylvania, 14,601 in New Jersey, and 11,283 in Rhode Island." Connecticut is largely a native and alien, rather than a composite, American state.

If we cross the country and consider the corresponding data for California, we find that "of the 3,426,861 inhabitants of California, 1,268,243, or 37 per cent., were natives of that state; 1,400,993, or 40.9 per cent., were natives of other states or of the outlying possessions; and 757,625, or 22.1 per cent., were born in foreign countries. Of the natives of other states, 137,602 were born in Illinois, 104,828 in Missouri, 102,076 in New York, 88,797 in Ohio, 86,551 in Iowa, 72,196 in Pennsylvania, 62,885 in Kansas, and 61,249 in Indiana." California is a composite, American state.

On the whole, we find from these two samples that the inter-state migrations of the American people are very extensive,—so extensive, indeed, that the mixture will insure a uniform culture, including political integrity and stability, and a common language, and second, a tendency toward biological assimilation which will become more and more apparent with the decline of immigration, and with the increased range of individual families and persons which makes possible wider choice and more certain mixture in mate selection.

REGISTRATION AREAS FOR BIRTHS AND DEATHS.

"The Registration Area for Deaths was established in 1880 and at that time comprised Massachusetts, New Jersey, the District of Columbia and certain cities outside the states mentioned. The population of the entire area formed 17.0 per cent. of the total population of the United States. At present the area comprises 34 states, 16 cities in other states, the District of Columbia and Hawaii, with 82.2 per cent. of the total population. The birth-registration area is of later origin. It was established in 1915 and comprised at that time Michigan, Minnesota, New York, Pennsylvania, the six New England states, and the District of Columbia, representing 31.1 per cent. of the total population. It now comprises 27 states and the District of Columbia, with 65.3 per cent of the population of the United States.

"The Bureau prescribes a certain

standard of efficiency which must be attained by the local health boards or departments before the given state can be admitted to the Registration Area. The law under which the births and deaths are recorded or registered by the local organizations must conform in the main to what is called the 'model law,' which was drafted by the Bureau in coöperation with the American Public Health Association.

"As regards the extension of the Registration Area, the attitude of the Bureau is by no means a passive one. It does not simply wait for the states to come forward on their own initiative and apply for admission to the Registration Area, but goes after them one by one, using its influence to persuade them to fall in line; and the movement has now gained such momentum that it will be only a comparatively short time, I believe, before the Registration Area embraces the whole United States."

(Dr. Joseph A. Hill in *Journal of Criminal Law and Criminology*, Vol. XIII, No. 4, February, 1922.)

THE REGISTRATION OF CRIMINAL STATISTICS.

In a paper by Dr. Joseph A. Hill, Assistant Director of the United States Census, which appeared in the *Journal of Criminal Law and Criminology* for February, 1922, the author considers, from the standpoint of the history, the compilation of statistics of births and deaths in the registration areas, and the possibility of extending a similar registration system to the compilation of criminal statistics by the United States Census Bureau. Dr. Hill points out the greater difficulty in criminal statistics than in birth and death data. "A birth or a death is a definite thing, a physical occurrence ordained by the law of nature, and admitting of no variation in degree. Births and deaths, moreover, are events not easily concealed even if a motive for concealment exists, which is not ordinarily the case. A crime or criminal offense, on the other hand, is not always obvious or definite. It varies greatly in kind and degree, being determined or defined by variable man-made laws. No conduct or action, however repugnant to our ideas or morality, is a criminal offense unless it is prohibited by statute or by the common law."

"Owing to this diversity in law, statutes and criminal codes, a standard international classification of crimes would be vastly more difficult to achieve than a similar classification of the causes of death, for the causes of death are the same the world over. The same kind of difficulty, though less in degree, exists in establishing a standard classification for the United States; for while the criminal codes of the different states are, in the main, similar, being based upon the common law, there is, nevertheless, great variety in definition, terminology, and practice, particularly as regards minor statutory offenses."

Nevertheless, Dr. Hill is of the opinion, and the Director of the Census takes the same position, that the matter of compilation of criminal statistics, through the coördinating influence and direction of the Bureau of the Census, is a practicable and feasible thing, and that the present time is especially opportune for the undertaking, because the Fourteenth Census compilation is now approaching completion, and the Bureau of the Census soon will be at greater liberty to undertake new functions.

RAT REPRESSION BY SEXUAL SELECTION.

Dr. G. Jennison in the Sanitary Supplement of the *Tropical Disease Bulletin* of the Royal Sanitary Institute, October 30, 1921, presents an analysis of the so-called Rodier system of destroying rats, by which system only the females are killed. It is claimed that the present common system which civilization follows in destroying rats actually aids the species in its struggle for existence. "The more rats killed, the more food for the remainder; the more males killed, the greater the chance for the doe to breed quietly and raise her offspring. These two facts together neutralize all the good effects of indiscriminate slaughter. The rats can be reduced quickly to a certain point, beyond which it is almost impossible to make further progress, and from which they soon reach their former numbers if at all neglected; for example, in Copenhagen rat catchers caught 100,000 in four months, August 8 to December 8, 1904; they could still catch 99,000 in the three months of July quarter, 1908, under the new rat law.

"The low level seems to be that point at which the rat can get food without risk; further, if it be true, as is often stated, and is, I think, proved by the great increase in females captured during the famine occasioned by the war, that male rats are more courageous than females, the indiscriminate slaughter is actually harmful, for the bold, roving male is caught out of proportion to his numbers, and the race tends to grow more and more polygamous, following a law of nature, which is understood and followed by breeders of domestic animals, and I have reason to believe is fully appreciated by rat and rabbit catchers who look to a supply of rodents to keep them in work. The wild ram has, perhaps, six ewes; the domesticated, forty. The domesticated stallion covers far more than the wild horse, and the barnyard cock has thrice the harem of the jungle fowl.

"All breeders of pheasants for shooting know the risk from too many males, and habitually kill off many cock birds before mating time. A herd of guinea pigs or flock of budgerigars, if left to itself, will finally become all male.

"The author supports his contention by two examples, the bird of paradise, whose males have been hunted throughout all time and yet survives, and the passenger pigeon, now extinct, where the females were killed. 'Man upset the balances of the sexes, and the ardor of the male pigeon completed the disaster.'"

Compared with the common system of vigorous attempts at indiscriminate extermination by professional rat catchers, on the one hand, and on the other, the Rodier system of destroying only females, Jennison reports that where the indiscriminate slaughter system was applied, rats were reduced only one third in twelve years, whereas at Belle Vue, where the Rodier system was in effect, the rat population was reduced gradually to about one half in five years.

The lesson is that poisoning, shooting and spring trapping must cease. The rats must be caught alive, the females destroyed and the males released.

RUSSIAN DEMOGRAPHY.

In *The World's Health* for March, 1922, appears an abstract of a paper by Dr. R. N. Syssine (*Journal Médical de Moscou*, May, 1921), in which the following phenomena are set forth: "In most countries at the present times, large towns are becoming more

congested. In Russia, on the other hand, they are becoming depopulated by an unusually high mortality, by decrease of the birth-rate or by the migration of the inhabitants into the country." Statistics show "a diminution of 49.6 per cent. in the population of Moscow and 71 per cent. in that of Petrograd. Petrograd has lost more citizens than any other town, but the tendency is quite general, for the average reduction in the population of the 32 largest towns of Russia, since the beginning of the War, is as much as 32 per cent." In Moscow the death-rate per thousand inhabitants ran as follows:

1915	22.1
1917	21.2
1919	50.4
1920	46.2

In the age group above fifty, where privation and sickness are less successfully resisted, the death-rate has risen from 49 to 158 per thousand. The infantile death-rate was thought to be as high as 272 in 1919.

In Moscow the marriage rate per thousand inhabitants has risen from 5.5 in 1914 to 19.6 in 1920. This is ascribed to new social regulations.

COUNTRY OF BIRTH OF THE FOREIGN-BORN WHITE POPULATION OF THE UNITED STATES, 1920.

Country of Birth (Postwar Boundaries).	Number.	Per Cent. Distr.
All countries	13,712,754	100.0
EUROPE		
Northwestern Europe:		
England	812,828	5.9
Scotland	254,567	1.9
Wales	67,066	0.5
Ireland	1,037,233	7.6
Norway	363,862	2.7
Sweden	625,580	4.6
Denmark	189,154	1.4
Netherlands	131,766	1.0
Belgium	62,686	0.5
Luxemburg	12,585	0.1
Switzerland	118,659	0.9
France:		
France	188,569	0.9
Alsace-Lorraine	34,321	0.3
Central Europe:		
Germany	1,686,102	12.3
Poland	1,139,978	8.3
Czechoslovakia	362,436	2.6
Austria	575,625	4.2
Hungary	397,282	2.9
Jugo-Slavia	169,437	1.2
Eastern Europe:		
Russia	1,400,489	10.2
Lithuania	135,068	1.2
Finland	149,824	1.1
Rumania	102,823	0.7
Bulgaria	10,477	0.1
Turkey in Europe	5,284	
Southern Europe:		
Greece	175,972	1.3
Albania	5,608	
Italy	1,610,109	11.7
Spain	49,247	0.4
Portugal	67,453	0.5
Other Europe	5,901	
ASIA		
Armenia	36,626	0.3
Asia Minor	2,404	
Palestine	3,202	
Syria	51,900	0.4
Turkey in Asia	8,610	0.1
Other Asia	7,708	0.1
AMERICA		
Canada:		
French	307,786	2.2
Other	810,092	5.9
Newfoundland	13,242	0.1
Mexico	478,383	3.5
West Indies	26,369	0.2
Central and South America	20,929	0.2
OTHER COUNTRIES		
Atlantic Islands	38,984	0.3
Australia	10,801	0.1
All other	17,727	0.1

EPILEPSY IN THE OFFSPRING OF EPILEPTICS.

Dr. D. A. Thom, former pathologist, and Gerna S. Walker, former social service worker of the Monson State Hospital, present a paper in the April, 1922, issue of the *American Journal of Psychiatry*, in which they conclude:

"1. Epilepsy as a disease is not transmitted directly from parent to offspring, but rather, we believe, that it is the nervous system lacking in the normal stability that is inherited and the manifestations of this instability may be mental deficiency of all degrees, insanity of various types, neurological and psychopathic disorders, convulsions from various exciting causes, which would have little or no effect on a normally developed nervous system.

"2. These mental and nervous disorders are less frequently found in the offspring of the so-called epileptic than we have heretofore believed and the future of the offspring borne of epileptic parents is not as hopeless as the pessimistic authorities on heredity record.

"3. Maternal defects are more frequently manifested in some form or other in the offspring than are the paternal defects and, when present, are more likely to appear at an earlier age.

"4. . . .

"5. In this study it was found that convulsive disorders were more frequently found in the offspring of the organic group as compared with the idiopathic group. The organic group is, however, so small that too much consideration cannot be given to this point. It should, nevertheless, stimulate further inquiry relative to the offspring of normal individuals and a larger group of organic cases.

HEREDITARY MICROPHTHALMIA.

Ash (*British Medical Journal*, London, April 8, 1922) presents the history of a family affected with hereditary microphthalmia. Among thirty-four traced members there were eleven cases of congenital blindness. All the affected members were males, the condition being transmitted through healthy females, as in hemophilia; the children of male members of the family are normal. In that branch of the family in which Ash has been particularly interested, of four boys three are blind from congenital microphthalmia, while the twin brother of one of the boys is normal. The one female child is normal. The father and mother are normal persons. In fact, the parents of all the blind children throughout the family are apparently normal. There is no evidence of consanguinity in the family and no history or evidence of syphilis. One is an epileptic; all the other children are free from congenital or acquired disease apart from microphthalmia. (Abs. in *Jour. A. M. A.*, May 20, 1922, p. 1573.)

PATHOGENESIS OF ENDEMIC CRETINISM.

Jona and Lusso (*Riforma Medica*, Naples, March 6, 1922) have been studying conditions at Cogne, a notorious mountain focus of endemic cretinism, and confirm that there is an evident connection between poverty and cretinism, and that alcohol, syphilis and inbreeding must be incriminated. (Abs. by *Jour. A. M. A.*, May 27, 1922, p. 1671.)

The July Number.

The July number of the *Eugenical News* will be devoted to an account of the papers and business of the tenth annual meeting of the Eugenics Research Association.

EUGENICAL NEWS

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Eugenics Research Association Number

TENTH ANNUAL MEETING.

The tenth annual meeting of the Eugenics Research Association assembled at the Eugenics Record Office at Cold Spring Harbor on Saturday, June 10, 1922. The meeting was called to order at 11:00 A.M. by Ex-President Irving Fisher, who presided until after the Presidential address. At twelve o'clock noon President Lewellys F. Barker assumed the chair and presided during the remainder of the day. At 1:15 P.M. adjournment was had for lunch, and at 2:30 P.M. the Association reassembled. At the expiration of the scientific program at 4 P.M., President Barker called the business meeting to order.

At 4:30 P.M. the meeting adjourned and members of the Association and other guests were escorted to the train which left Cold Spring Harbor Station at 4:46 P.M.

The several scientific papers which were presented at this meeting are reviewed in the following abstracts.

1. Presidential address, The Relation of the Endocrine Glands to Heredity and Development,* by Dr. Lewellys F. Barker, Baltimore, Md.

Since the object of the Eugenics Research Association is the advancement of knowledge that will contribute to the improvement of the human race by inheritance, its members can scarcely fail to be interested in the discussions that are now going on regarding the glands of internal secretion and their relations to heredity. As a medical man, deeply interested in the problems of constitution and of condition and profoundly impressed with the recognizable influences of internal secretions upon form and function in both normal and pathological states, I welcomed the suggestion of Dr. Davenport that I deal in my presidential address with the topic announced.

The Endocrine Organs and their Products.

It is only comparatively recently that the significance of the so-called ductless glands and of the substances they manufacture has become recognized, but, in a very short time, a considerable body of knowledge concerning their structure, their functions, and their inter-relations has been accumulated. At the moment, studies of the internal secretions, or, as many now call them, the "incretions," are, on account of their astonishing and novel revelations, attracting the attention not only of scientific workers in biology and medicine but also, perhaps to too great an extent, that of the laity. Important as knowledge of these incretions is for an understanding of bodily and mental states, there is some danger, I think, of over-emphasis and of disproportionate prominence.

Though an incretory function has been ascribed to many organs of the body, the principal endocrine organs, those whose function is best understood, are seven in number: (1) the thyroid gland, (2) the parathyroid glands, (3) the hypophysis cerebri, or pituitary gland, (4) the epiphysis cerebri, or pineal gland, (5) the supra-

* This address was printed in full in *Science* for June 30, 1922.

renals (consisting of two parts of entirely different functions: (a) the medulla or chromaffin portion, and (b) the certex or interrenal portion), (6) the islands of Langerhans of the pancreas, and (7) the interstitial tissue of the gonads (ovaries and testicles) or so-called "puberty gland."

There is evidence that each of these organs yields an internal secretion that, distributed through the blood, exerts important chemical influences upon other, more or less distant, organs and tissues. Some of these influences have been definitely determined, but it will doubtless be a very long time before all of them will be exactly understood. The knowledge that has been gained concerning the thyroid, the pituitary, and the suprarenals gives promise, however, that steady research will gradually enlarge our information regarding the influences exerted by each of the incretory glands.

The Better-known Endocrinopathies.

I may cite just two characteristic clinical syndromes met with in association with disease of the thyroid gland, namely, exophthalmic goiter and myxœdema. In the former, known also as Graves' disease or Basedow's disease, we observe, in typical instances, a markedly enlarged pulsating thyroid gland (goiter) in the neck, a persistently accelerated pulse-rate (150 or more to the minute instead of the normal rate of 72), marked nervous symptoms including fine tremor of the fingers, outspoken protrusion of the eyeballs (exophthalmos), a tendency to profuse sweats and to watery diarrhœa, sensitiveness to heat, a peculiar psychic overalertness and apprehensiveness, and a tendency to rapid emaciation (despite an abundant food intake) associated with demonstrable acceleration of the rate of the basal metabolism.

In the idiopathic form of myxœdema (or Gull's disease) the clinical conditions are diametrically opposite to those in exophthalmic goiter. The thyroid gland is small, the pulse-rate is usually slow, the eyes look sunken (enophthalmos), the lid-slits are narrow, the bodily movements are slow and clumsy, the patient is mentally dull, forgetful and apathetic, there is sensitiveness to cold and a tendency to constipation, the hair falls out, the skin is dry, thick and wrinkled and there is a tendency to obesity (despite a restricted food intake) associated with demonstrable retardation of the rate of the basal metabolism.

Two similarly contrasting clinical syndromes, due to disorders of the hypophysis cerebri or pituitary gland, may next be mentioned, namely, (1) gigantism and acromegaly, due to over-function, and (2) Froehlich's syndrome of obesity with genital dystrophy, due to under-function. When there is over-function of the pituitary gland in early life before the epiphyses of the long bones have united with the shafts of those bones, there is over-stimulation of bony growth and the patient becomes excessively tall (gigantism). When the over-function of the pituitary gland occurs in later life (after epiphyseal union), bony over-growth is still stimulated but manifests itself in enlargement of certain parts of the skull and of the hands and feet (acromegaly). There is also enlargement of the tongue and of the internal organs (splanchnomegaly). The victim presents a very characteristic appearance. The face is hexagonal, the nose is broad, the chin is prominent and curved so as to bend sharply upward, the cheek bones are outstanding and

the arches above the eyes are prominent. Looked at from the side, the face resembles that of Punch (nut-cracker profile). The hands are spade-like, the fingers are sausage-shaped, and the feet are huge. On the other hand, when there is under-function of the pituitary gland during development, a condition (Froehlich's syndrome) in marked contrast to gigantism and acromegaly results. The skeletal development is defective, the growth of bone being less than normal. The patient is short of stature, the face remains child-like and the hands and feet are small (acromicria).

Again, let us contrast two clinical pictures believed to depend upon disorders of the suprarenal capsules: (1) Addison's disease, met with in destruction of the suprarenals (hyposuprarenalism) and (2) pseudohermaphrodism, premature puberty, and hirsutism, met with in association with hyperplasias of the suprarenals (hypersuprarenalism). In Addison's disease there is great weakness and prostration, associated with low blood pressure, diarrhœa and other digestive disturbances, chronic anæmia and often a peculiar bronzing of the skin (melanoderma). On the other hand, when there is over-function of the suprarenals, the clinical picture is markedly different, though it varies somewhat with the time of onset of the hyperfunction.

Constitution and the Endocrine Organs.

Biologically considered, a developed human being, like all developed higher organisms, must be looked upon as the resultant of a long series of reactions between the zygote (fertilized ovum) and its environment. The genotype, reacting with the surroundings, becomes the phenotype, or, in the case of human beings, the "realized person." The germ-plasm provides the determining factors, the environment the realizing factors.

The chemical consideration of endocrine disorders has, in my opinion, given a strong impetus to this movement toward a revival of studies of the physiology and pathology of constitution. For though the endocrine organs are, in some instances, accessible to trauma and to poisons and parasites that reach them through the blood-stream, diseases of these organs, especially those "idiopathic" chronic diseases that develop insidiously and give rise to the classical endocrine syndromes, appear to be, usually, of endogenous rather than of exogenous origin, that is to say, they develop as the results of special anomalies of constitution. This explains the fact that endocrinopathies tend to run in families, and the interrelationships that exist among the different endocrine organs may explain why a disease of the thyroid (exophthalmic goiter) may appear in one member of a family, a disease of the pancreas (diabetes mellitus) in another, a disease of the hypophysis (dystrophia adiposogenitalis) in a third, or a pluriglandular disorder in a fourth member of the same family.

Studies of the symptoms of endocrine disorders and studies of partial anomalies of constitution affecting the endocrine organs are thus throwing much light not only upon (1) the mode of action of the incretions, but also upon (2) inheritance as a determining cause of endocrinopathic phenotypes.

Through correlative differentiation (due in part at least to the action of the incretions), the developing organism gradually comes to exhibit the characteristics of its species, its age,

and its sex. Even the anthropologists now maintain that the solution of the problem of how mankind has been demarcated into types so diverse as the Negro, the Mongol and the Caucasian will involve the study of hormonic mechanisms.

Can Hormones Modify Unfertilized Germ-cells so as to Influence Inheritance?

Experiments upon the influence of incretory substances upon the development of cold-blooded animals have yielded such striking results that many have wondered whether incretions circulating in the blood might not permanently alter the germ-plasms so as to account in animals for the origin of mutations and new biotypes.

Many physicians have leaned toward Lamarckian or neo-Lamarckian theories that assume the inheritance of acquired characters, though those who have been trained in the methods of modern biology usually reject Lamarckism and attempt to explain the apparent inheritance of "acquired characters" for a generation or two by assuming either a "germinal injury" (in the sense of Forel's "blastophthoria") or a "parallel induction."

The consensus of biological opinion in this country is strongly opposed to the inheritance of acquired characters. Mendelian studies lend no support to the view that conditional influences can affect inheritance factors. If inheritance of acquired characters really occurred, why should there not be an abundance of positive evidence to prove it? Until more proof has been brought than has hitherto been advanced, we shall not be justified, so far as I can see, in accepting the theory that conditional influences change hereditary factors. There are enough relationships of the endocrine organs to heredity and development (aside from the problem of the inheritance of acquired characters) to long keep us rewardingly occupied.

2. The Endocrinopathic Background of a Psychoneurosis, by Dr. Edith R. Spaulding, New York, N. Y.
3. Endocrine Therapy in Feeblemindedness, by Dr. H. W. Potter, Letchworth Village, Thiells, N. Y.
4. The Effects of Vasectomy, by Dr. Harry Benjamin, New York, N. Y.

The effects of vasectomy (Steinach operation) have to be understood from an endocrinological aspect. They consist of histological changes in the testicle and of clinical symptoms, due to the increased endocrine activity. The testicle performs two functions: (1) An external secretion, the sperma, produced by the generative portion (seminal epithelium). (2) An internal secretion, hormone, produced by the puberty-gland, that is mainly the interstitial (Leydig) cells. When the vas deferens is resected, sperma cannot be discharged from that side, and the cells of the generative portion of the respective testicle atrophy. Their place is taken by proliferating interstitial cells, which produce an increased output of testicular hormone, tending to stimulate the entire endocrine system, in the sense of a reactivation. The resulting clinical changes are partly due directly to the new activity of the sex-gland, and partly to the response of the other endocrine glands. Thus, physical and mental strength is favorably influenced, memory improves, ambition returns. Occasionally improvement of eyesight and hearing is noticed. Body-weight increases, blood-pressure drops regularly. Beginning arteriosclerosis is

checked. Sexual libido and potency return or increase. In certain very favorable and responsive cases an actual "rejuvenation" occurs. It takes from 4 weeks to 6 months for these symptoms to develop. Beginning senility and arteriosclerosis, the male climacterium and functional cases of sexual impotency are the best indications.

5. The Mental Health of 463 Offspring from Dementia Præcox Stock, by Dr. Myrtelle M. Canavan, Massachusetts Department of Mental Diseases, Boston, Mass.

Dr. D. A. Thom, Chief of the Out-Patient clinic at the Boston Psychopathic Hospital, reporting in the April number of the *American Journal of Psychiatry* a study of the offspring of epileptics, gave a more hopeful note in the lack of convulsive inheritance that a group of 431 children from epileptic stock showed (14 epileptics in this number). Epilepsy having a great bearing on industrial conditions and employment and inheritance being a definite fear of many people, this study was of great importance.

Since dementia præcox forms a very stable portion of the Massachusetts State Hospitals' population and is a very frequent psychiatric diagnosis both in and out of the army (while recognizing that every diagnosis is a matter of opinion), a study of dementia præcox offspring was begun. This study also had interest for the value it might have in finding the early untoward symptoms which might be correctable even if a diagnosis of dementia præcox was not tenable in the offspring.

One thousand dementia præcox patients so designated, with no alternative diagnosis, were taken as a basis of this study and the number of marriages determined. A count of the living children showed 463 from the 275 matings, 194 of whom were women who had been patients at the hospital. Miss Rosamond Clark, collaborating, undertook the social investigation and the inquiry consisted of recording the number of children per mating, number dead and causes of deaths (total 82), the school grade of those in school, whether repeating or skipping grades, their health, habits, economic grade (if working), their conflict with the law, if any. The high per cent. of lack of unstable inheritance was gratifying.

Considering the fact that a great number of these patients had been foreign born and were not financially able to give their children the watchful medical care that those in better circumstances can, it was a surprise that only 17 were physically diseased. Since the disturbed home conditions (one parent away or not strong) can be indirectly blamed for some of the conduct disorders (stealing to larceny) and some probably directly chargeable to inheritance, 36 is not so large a number to have indulged in conduct disorder. Twelve were backward and 4 were feebleminded. Five were dementia præcox (2 of these dead), and 12 were nervous. If the nervous child of today is the dementia præcox of tomorrow, then the alarm is for this 12, but their degree of "nervousness" on review seems not very grave.

Of the normal (294), no one has been examined by a physician, but the fact that though 80 per cent. are under 16 years, *none has shown symptoms* to date, is cheering. Of the 86 deviators, 68 per cent. *were* under 16 years. One was unaccounted for.

The value of this inquiry, if made again in 1925 and 1930, will definitely prove the value of the present figures.

6. Eugenics and Crime Prevention, by Honorable Harry Olson, Municipal Court of Chicago, Chicago, Ill.
7. The Intermixture of Races and Disease-Frequency in Hawaii, by Dr. Frederick L. Hoffman, Prudential Insurance Company of America, Newark, N. J.

It may be questioned whether anywhere in the world better opportunities exist for a scientific study of the transmission of ancestral strains through race intermixture, and the effect of such intermixture on the quality of the offspring. It is regrettable that no anthropometric studies should thus far have been made which would justify conclusions as to the alleged racial improvement of intermixed racial elements.

Supplementary to my earlier investigation, I have since completed an analysis of the causes of death during the period 1910–15, but the material is of such complexity as hardly to admit of a brief generalization. It is difficult enough to attempt an analysis of two factors of variable degree, but when possibly half a dozen such factors enter into the problem, the numerical basis for sound conclusions is generally reduced to insignificant proportions. The problem, for illustration, of determining whether the offspring of a father born in China and a mother born in Hawaii, of native Hawaiian stock, is superior in disease resistance to the offspring of a father born in the United States and a mother born in Hawaii, of pure or mixed-blood Chinese ancestry, is a practically hopeless one in view of the paucity of numbers. For, when separate diseases are considered, even on an originally sufficient numerical basis, it is soon reduced to proportions totally inadequate for scientific purposes. Thus, for illustration, of male persons dying in Hawaii whose fathers had been born in Hawaii, and whose deaths were attributed to pulmonary tuberculosis, at all ages 10.4 per cent. died from this disease, while at ages 10–19 the proportion was as high as 36.5 per cent.; of those whose fathers had been born in Portugal the proportion was only 11.6 per cent.; of those born in China, 26.2 per cent.; and in Japan 20.6 per cent. Other nativities are quite insufficient in number for scientific purposes.

In the case of females who died in Hawaii and whose fathers had been born in Hawaii, the mortality from pulmonary tuberculosis at all ages was 14.3 per cent., reaching a maximum of 44.8 per cent. at ages 20–29. Of those whose fathers had been born in Portugal, however, the proportion of deaths from tuberculosis at this age group was 30.8 per cent.; while those whose fathers had been born in China showed a proportion of 55.3 per cent., and in Japan 22.6 per cent. In other words, in the case of women the age period of maximum frequency as to occurrence of tuberculosis is, on the average, ten years later than in the case of men.

In the case of males dying in Hawaii, whose mothers had been born in Hawaii, the proportion of deaths from pulmonary tuberculosis at all ages was 9.7 per cent., the proportionate maximum being reached at ages 10–19 with 39.3 per cent. For those whose mothers had been born in Portugal, the maximum was not reached until ages 20–29 and was 25.8 per cent. Also in the case of those whose mothers had been born in China the highest proportion occurred at ages 20–29, or 54.5 per cent., while for those at this age period, whose mothers had been born in Japan, the proportion was only 14.1 per cent.

In the case of females dying in Hawaii, whose mothers had been born in Hawaii, the percentage of deaths from pulmonary tuberculosis at all ages was 14.4, while the maximum proportion was not reached until ages 20–29, of 46.0 per cent. Of those whose mothers had been born in Portugal at this period of life, the proportionate mortality was 30.6 per cent., and of those whose mothers had been born in China, 50.0 per cent. Of those whose mothers had been born in Japan, the proportion was only 22.4 per cent.

To carry the disease and age group, as well as racial and sex combination, to an extended analysis obviously involves not only extended consideration, but painstaking care. In many cases, as has previously been said, the numbers are entirely too small when considered with reference to selected groups of age, and this applies particularly to such important racial elements as those of Porto Rican, Spanish, Korean, and Filipino parentage, all of which enter quite considerably into the racial make-up of the Hawaiian people. But the material is available for a more extended study, which would seem suggestive of considerable medical value in developing a sound race pathology for these and other population groups of the islands of the Pacific Ocean.

8. Lethal Selection in War, by Professor H. R. Hunt, University of Mississippi, University, Miss.

Does lethal selection in war reduce the percentage of mentally superior persons in the populations involved? A very extensive study, involving the consideration of numerous factors, will be required to furnish an accurate answer to this question. The facts and conclusions here cited are merely a preliminary excursion into the field.

The official records of the University of Mississippi prior to, and during, the Civil War throw light on this question. About nine hundred regular students registered in the Department of Arts of the University between 1851 and the institution's temporary closure in the fall of 1861. Complete scholastic records of many of these students are available. Forty-seven are known to have died in the Confederate Army. Thirty-nine of these were killed in battle or died of wounds. This record of mortality in battle is doubtless incomplete, though as a sample it is probably representative. The remaining eight constitute undoubtedly a minority of those who died from causes other than injuries in combat.

Each class containing one or more of the forty-seven was divided into five equal groups (1, 2, 3, 4, 5) on the basis of the grades awarded in the University courses. Group 1 contained the most intelligent, group 5 the dullest members of each class, etc. Forty-four of the students who died in the Army were rated on one or two years of work; the remaining three were graded on less than a year of study. The mean rating of the forty-seven is $2.47 \pm .13$, and of the thirty-nine the mean rating is $2.32 \pm .13$. Inspection of the probable errors shows that these averages differ significantly from the mean for all the students considered, 3.00 ± 0.00. Twice as many, in the group of forty-seven, rate from 1–3 as from 3–5. Among the thirty-nine, there are 2.4 times as many above the mental average as below it. It is therefore probable that mortality in battle lowered the average mentality of the small group considered, and was dysgenic in nature.

A measurable tendency of the same kind occurred in the battles of the recent World War. The army mental tests showed that the commissioned

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ACCESSIONS TO ARCHIVES OF THE EUGENICS RECORD OFFICE,

JUNE, 1922.

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officers were on the whole mentally superior to the enlisted men. The death rate among the officers, due to injuries in battle, exceeded the rate among the enlisted men by 1.9 per 1000. On the contrary, the death rate was greater among the enlisted men than among the officers when *all* causes, including disease, are considered. This apparently eugenic effect of the war may be found actually to be dysgenic in nature when the death rates among corresponding groups in the civil population are determined; for army life may have increased the mortality rate in the officer type, while lowering it in the type represented by the enlisted man. The writer is investigating this possibility.

Criticisms.

(1) The suggestion was made that the death rates in the United States Army, attributable to causes other than injuries in battle, should be compared with the rates among corresponding groups in the civil population. This comparison would enable one to estimate the deaths which were due exclusively to army life in war time.

(2) The statistical validity of the data for the University of Mississippi was questioned.

9. Eugenics and the American Genetic Association, by Dr. David Fairchild, Bureau of Plant Industry, Washington, D. C.

Had it been possible to represent the Association at your spring meeting I should have tried to express the ideals of those closest to the management of the Genetic Association. As I understand them, we feel the tremendous responsibility which rests upon the shoulders of the small body of men and women who are pioneering in this new and extremely difficult field. We feel that every one of the workers should realize that, in proportion to the far-reaching character and influence of each generalization in this new science, should be the certainty of its background of biological fact; that theories drawn from the consideration of human beings only must be trued up with the experimental evidence to be gathered from a study of animals and plants. The curious similarity of protoplasmic phenomena in all living matter demands that generalization in this field be quite as carefully made as in the field of physics, and, since the electrochemical character of that matter is still so much of a mystery, it behooves us to tread very carefully in

this new world of electrons and electromotive forces, lest we merely build those obvious theories with the wrecks and derelicts of which the beaches of science are strewn and its waterways obstructed. To present the facts and illustrate them so that they will attract the attention of this and also the next generation and bring to the research men an intelligent, eager audience is the chief object of the *Journal of Heredity.*

10. The Institutional Social Worker with Special Reference to Family History Study, by Dr. Aaron J. Rosanoff, Kings Park State Hospital, Kings Park, N. Y.

In this paper Dr. Rosanoff made the following seven points:

(1) Field workers in state hospitals interested particularly in family studies and trained for such work almost invariably find themselves sooner or later devoting the greater part of their time to social investigations.

(2) I believe this is due primarily to the pressing need that is felt in such institutions for fullest possible data concerning *all* factors in etiology of all cases of social maladjustment—which means all cases admitted—and not of some *one* factor, however important, such as heredity. In the daily work it is not possible to ignore this need without greatly impairing the usefulness of institutional service.

(3) From the standpoint of the interests of eugenics, this is, in my opinion, by no means wholly a disadvantage. In a given case the rôle of the constitutional factor can never be exactly measured without taking full cognizance not only of familial and inborn traits, but also of all environmental factors which contribute in any way to the social maladjustment which determines the segregation of the individual.

(4) The only disadvantage lies in the too great diversion of energies, intended for family studies, from such studies to other work. The result is that official institutional heredity statistics are falling back to the older standards of inaccuracy and incompleteness and lead insidiously to misinformation of the public as to the more fundamental causes of social maladjustment.

(5) My institutional experience has convinced me that in the organization of institutional activities as they are carried on at present, there is insufficient provision for both the biological and sociological phases of the work that has to be done. Institutions having a staff of fifteen physicians often have either no social service department at all or only one social worker who is charged with the duties of making family studies, taking anamneses, making intelligence tests, conducting social investigations, supervising paroled patients, etc., etc.

(6) What, then, is the remedy? I have not the least hesitation in saying that an institution which has a sufficient number of patients to require the services of fifteen physicians also requires a staff of at least thirty field workers for the various important phases of the work which have already been mentioned.

(7) I also have no hesitation in saying that such an increase in the field working force would result *immediately* in vast financial savings to the state, to say nothing of the almost unlimited possibilities of truly effective work of social readjustments.

11. Normal Changes in Body Build During Development, by Dr. Charles B. Davenport.

Body build may be most simply conceived of as transverse diameter

in relation to stature, i.e., *relative* chest diameter, or girth. Accordingly, this ratio was plotted for boys year by year, from birth to maturity at 21 years. The data utilized were chiefly those of Quetelet from 1 to 20 years; of Weissenberg (1911) 2 to 20 years; of Benedict and Talbot (1921) from 2 to 7 years; of Town (1921) 5 and 6 years; of Gray and Jacobs (1921) from 6 to 20 years; of Reitz (1904) from 9 to 19 years; of Niceforo (1921) Italians of the poorer class from 8 to 14 years; of Godin (1903) French school boys from 13 to 17 years; of Hoffman (1917) recruits from 18 to 21 years; of Hitchcock (1900) Amherst College Students from 16 to 21 years; of Baldwin (1921) New York City school boys from 7 to 17 years. In addition, original observations at a day nursery, age 2 to 7 years, are included. For the first year of life additional data were utilized: the records published by Crum, unpublished records on about 1,000 children of New York City taken at milk stations, and about 150 records made by Dr. Bret Ratner of New York City. Finally, chest girth and height were taken daily on 11 children from birth to 10 days (inclusive) by the kind coöperation of Dr. Ratner.

Plotting these data, a curve of build (relative chest girth) was obtained which starts at birth at about .66, falls during the first week of life to about .65, then rises again to .66 and then falls after two months with great regularity to 13 years. The ratio at 7 years is .50 and at 13 years .47. The curve then rises slightly to 14 years, and then rapidly to 17 years. It now slows up to 21, and still more to 30 years, when it rises with extreme slowness to about 55 years. Thus the curve of build shows one maximum at birth and another at about 2 months; it shows two minimums, one at 5 to 7 days, due to incomplete adjustment of the child to its new method of feeding; and one at 13 years due to the fact that at this period the legs have grown long very rapidly while the chest retains a juvenile slenderness. Thereafter the chest expands greatly, linear growth of legs slows up and the relative girth steadily increases.

12. The Importance of the Work of the Medical Examiner's Office from the Standpoint of Eugenics in America, by Dr. Spencer L. Dawes, Medical Examiner, State Hospital Commission, New York.

It was during his first term that former Governor Odell was so impressed by the great number of aliens and non-residents in our State Hospitals that he brought the matter to the attention of the Legislature, which thereupon created a board of three medical men to investigate and to take appropriate measures for the purpose of relieving the State of its unjust burden—this body was called the State Board of Alienists. It did yeoman's work and laid the solid foundations on which we, who have come after, have been able to erect our more modern structure.

Later (in 1912) the name was changed and the board was called by the offensive and inappropriate name of Bureau of Deportation. The law was broadened and amplified. We now call ourselves, unless legally compelled to do otherwise—The Medical Examiner's Office.

Section 19 of the Insanity Law of New York State provides for the establishment of a bureau of deportation for the examination of insane, idiotic, imbecile and epileptic immigrants and alien and non-resident insane, and to attend to their deportation or removal; provides for its necessary per-

sonnel including a Medical Examiner who shall be in charge. It prescribes his and the other employees' duties, among them being a careful inspection and observation of the methods and facilities for examining immigrants at the Port of New York and in the State Hospitals and other public institutions and elsewhere. To take steps under the State and Federal statutes for the removal of all of the prohibited classes which are in the State contrary to law. The Medical Examiner is given power to administer an oath when necessary in making investigation.

This office has jurisdiction as to citizenship and legal residence of every admission into all of the State Hospitals.

Where an alien is beyond the deportable period and he wishes to be returned to his native country or his friends request his return, we procure passports, steamship ticket, etc., and send him home to his friends usually at the State's expense and in charge of an attendant, furnish him with new clothing and a sum of money to start out with.

The per cent. of First Admissions in the New York State hospitals was (as of June 30, 1920):

Foreign born	45.3
Native born	54.5

The parentage was:

Foreign born parentage	56.8
Mixed parentage	13.7
Native parentage	28.3

Of the total hospital population including readmissions:

56 per cent. were native born,
44 per cent. were foreign born.

The foreign born were notably fewer in the readmissions than the first admissions. The latter range broadly from Italy 16.7; Ireland 14.6; Russia 13.7 and Germany 11.7 to Finland 0.6.

Of the total hospital population,
56 per cent. were citizens by birth,
17.7 per cent. were citizens by naturalization,
26.4 per cent. were aliens.

In all the hospitals, civil, criminal and private, the percentage of first admissions was:

Dementia Præcox	30.3
Manic Depressive	14.1
General Paralysis	12.2
Alcoholic Psychosis	2.0
Constitutional Psychopathic Inferiority	2.8
Mental Defective	2.5
Epileptic Psychosis	2.2

The gravest danger from a eugenic standpoint lies in all probability with the manics, for these cases almost all have one or more lucid intervals during which they are not hospitalized, and also during the so-called mild attacks, they are at large as a rule when they may and usually do have offspring.

Doctor Ashley of Middletown State Hospital (New York) records in a recent paper based upon 1,000 discharges, that children were born to 29 of these, and 15 were married.

Doctor Salmon states that about 85 per cent. of the Slavic anl Italian races living in the United States are single, that the most of them enter the country free of syphilis and that many of them contract it during their first year here.

Several other states have been so impressed by our work that they have passed laws and created departments modeled on ours.

To sum up as to what we have done for Eugenics in America: This office investigates annually about 2,000 cases and in the 17 years of its existence has been instrumental in the removal of 18,946 insane persons, of whom 12,674 were aliens removed to other countries.

13. Deportation Systems of the Several States, by Dr. Harry H. Laughlin, Eugenics Record Office, Cold Spring Harbor, N. Y.

Historical Statement of the Problem.

Human migration is one of the four or five most potent factors in determining racial fortunes, and is, therefore, of great eugenical consequence. Traditionally, the American people have looked upon the immigrant as a sturdy, desirable addition to our citizenry. Indeed in the early times, the white immigrant stock was, on the average, much more sturdy and capable of developing under democracy than are the more recent immigrants. Immigration is now easy. Consequently there arrive many who come only for a few seasons' work, or who drift with the tide.

So thorough was the idea that this country was to be an asylum for the world's oppressed that it was difficult for the people and the legislatures of the country to provide well-functioning deportation laws. We have only to point to the nation's first attempt in 1798, during the administration of John Adams, when the Alien and Sedition laws were enacted. They failed principally because the country was not prepared for a deportation system, and secondly because of bad legal processes involved. It was not until October 19, 1888, that a permanent deportation law was finally placed on the federal statute books. This was necessary because aliens who were not assets to our body politic, but who, on the other hand, were degenerates and inadequates were being found in our midst in increasingly great numbers.

The Present Situation.

Our recent survey shows that in 1916 the several states expended on an average of 17.3 per cent. of their total governmental expenditures in maintaining custodial and charitable institutions. This percentage varied from 5.4 in Alabama to 30.5 in Massachusetts. A survey of 460 state institutions for the several types of the socially inadequate, with a total of 210,835 immates, recently (1922) completed by the Committee on Immigration and Naturalization of the House of Representatives, found 21.14 per cent. of these fifth of a million inmates to be of foreign birth and 44.09 per cent. to be of foreign stock—that is, of foreign birth or who have at least one parent foreign born. Thus if, on the average, it costs the same in the institutions to maintain native born and foreign born inmates, then currently the several states are expending approximately 7.62 per cent. of their total revenues in caring for degenerate and dependent human foreign stock. This is the logical outgrowth of the asylum idea which has pervaded the American immigration policy.

One reason for difficulty in functioning of deportation is the fact that due to our peculiar division of federal and state political functions, the United States manages immigration and deportation as an international, and consequently as a federal matter, while, at the same time, the several state governments assume the function and duty of maintaining and otherwise caring for social inadequates and degenerates. Thus unless there is more perfect coöperation between federal and state authorities, deportation of defective and degenerate aliens cannot become a well-ordered administrative process. Some states, like New York for example, have a Bureau of Deportation which coöperates very well with the federal authorities. Other states, such as

Massachusetts, New Jersey and California, have well-functioning state authorities delegated the task of cooperating with the Federal Government, but many of the states still abandon the duty entirely to the Federal Government.

One hundred and twenty-six institutions for the insane reported that of the total of 176,217 inmates, 28.35 per cent., or 49,957, were foreign born. Since 1888, these institutions have deported to foreign countries 6,740 inmates, and reported that 781 of their inmates are now awaiting deportation. These 781 awaiting deportation compared with the 49,957—the number of alien inmates—constitute only 1.56 per cent. The figures for other types of institutions run in quite parallel fashion.

Conclusion.

It is evidently necessary, in the first instance, to improve our immigration service by preventing the admission of undesirables, and second, to improve our deportation service, to make sure that in case the immigration service fails in the first instance, to remove, before damage has been done to our human stock, eugenically undesirable immigrants. Each state should provide a deportation bureau or officer, delegated the task of coöperating with the federal deportation service.

TENTH ANNUAL MEETING OF THE EXECUTIVE COMMITTEE OF THE EUGENICS RESEARCH ASSOCIATION.

This meeting was held at the Academy of Medicine, 17 West 43d Street, New York, on Friday, June 9, 1922, from 4:45 P.M. to 7:00 P.M. The Committee was called to order by Acting Chairman Dr. Stewart Paton and the following matters of business were transacted:

1. Time and place of the next annual meeting. It was agreed that the regular meeting for 1923 should be held at Cold Spring Harbor on some Saturday in June—the particular Saturday to be selected by the Secretary. It was further agreed that the Secretary negotiate with the American Association for the Advancement of Science with the view to holding a meeting of the Eugenics Research Association at the same time and place as the December, 1922 meeting of the American Association for the Advancement of Science.

2. The Report of the Nominating Committee was duly read and approved, and ordered reported as the official ticket for approval of the Association at the annual meeting on June 10th. (For this list of officers, see page 91.)

3. Twenty-five persons were duly recommended for election to membership in the Association. (For this list, see page 91.)

4. On motion, it was agreed that for the time being, the Eugenics Research Association would not seek formal affiliation with the Birth Control Conference.

5. Dr. Aaron J. Rosanoff was formally appointed as the official auditor of the Association's accounts for the year ending June 9, 1922. (For auditor's report, see page 91.)

6. By formal vote, it was declared to be the policy of the Executive Committee to favor the authority of the Secretary to permit members of the Association to change from one type of membership to another, provided, in each case, in the opinion of the Secretary, the particular member is qualified for membership in the proposed class.

7. The Executive Committee decided that a society as well as an individual

may become a member of the Association.

8. The Executive Committee expressed the opinion that until the Association became possessed of larger membership and more increased funds, the necessity for incorporation was not a pressing one, but the Secretary was instructed to bear the matter in mind and to revive the question at an appropriate date.

9. An accounting of the membership of the Eugenics Research Association in the pool or club of organizations which rented room No. 1553 in the Penn Terminal Building from January 1, 1922, to May 1, 1922, was duly rendered. The $100 thus spent was formally approved.

10. The matter of the relationship between the Eugenics Research Association and the new Eugenics Society of the United States of America was discussed at length. The consensus of opinion of the Executive Committee was to the effect that close coöperation and possibly organic union between the two organizations would be profitable to each society and to the purposes, the promotion of which actuate the existence of the societies. It was felt that the Eugenics Research Association should be held intact in so far as active memberships and support of eugenical researches were concerned, and that the new Eugenics Society of the United States of America, so far as patronage is concerned, might well take over the field now covered by the associate, supporting and patron memberships of the Eugenics Research Association. Thus the two fields of research and education in eugenics would be covered and would find support by the coöperation and possible union of these two societies.

11. Research Committees. It was recommended that Mr. Frank L. Babbott be added to the Committee on Immigration. The President was authorized to appoint a committee of three on the Roosevelt Memorial with the view to taking over the matter covered by the Roosevelt Memorial resolutions of this Association. By common consent, Professor Harrison Hunt was added to the Committee on War and Eugenics. Provision was made for the appointment of a Committee on the Genetic Basis of Human Behavior, said Committee to be appointed by the President after opportunity for consideration.

12. Journal of Eugenics. The matter of a Quarterly Journal of Eugenics was discussed. Bids and sample formats were received from several printers. The bids and formats examined showed that a quarterly journal of the approximate size and mechanical quality of the *Scientific Monthly* would cost about $1200.00 per year for the printing and publishing bill for an issue of five hundred copies, not including editorial expenses.

13. It was authorized that the EUGENICAL NEWS be offered to libraries at a discount of 25 per cent., and that to fifty libraries which could not afford purchase at the present time, the EUGENICAL NEWS be sent free for one year.

14. The Secretary was authorized and instructed again to present the resolutions of 1921 on Immigration, Federal Census and a Bureau of Eugenics to the proper officers and authorities.

15. The Secretary was instructed to prepare resolutions for submission to the whole society on June 10 in reference to

(*a*) The representation of Germany on the International Eugenics Commission.

(*b*) Appointment of Dr. Charles B. Davenport as delegate by proxy of the Eugenics Research Association at the Brussels meeting in October.

(*c*) The relation between the Eugenics Research Association and the Eugenics Society of the United States of America.

16. The Secretary was instructed to send the Academy of Medicine five dollars and a note of appreciation in consideration of the hospitality in permitting the Executive Committee to hold its annual meeting at the Academy of Medicine.

TENTH ANNUAL BUSINESS MEETING OF THE EUGENICS RESEARCH ASSOCIATION, COLD SPRING HARBOR, JUNE 10, 1922.

At the expiration of the scientific program, the business meeting was called to order by President Lewellys F. Barker. The principal items of business covered were as follows:

1. The report of the auditor, Dr. Aaron J. Rosanoff, stated that $498.66 were in the treasury on June 9, 1922, and that the books were examined and found to be correct.

2. The Nominating Committee which had been appointed by the Executive Committee, and which had met on May 26, consisted of Dr. Stewart Paton, Chairman, Professor Irving Fisher and H. H. Laughlin, Secretary. This Committee reported the following ticket, which was duly seconded by the Executive Committee and formally ratified by the Association: President until June, 1923, Honorable Harry Olson; Secretary-Treasurer until June, 1925, H. H. Laughlin; members of the Executive Committee for the class 1922–1925, Dr. Charles B. Davenport, Dr. Lewellys F. Barker, Mr. Frank L. Babbott; for the vacancy in the class, the term of which ends June, 1923, Mrs. Wortham James.

3. Twenty-five new members nominated by the Executive Committee as follows, were formally elected to membership: Mr. Frank L. Babbott, Dr. Bird T. Baldwin, Dr. Edmund M. Baehr, Dr. Charles F. Dight, Rear Admiral Caspar F. Goodrich, Prof. Harold R. Hagan, Mr. Reginald G. Harris, Dr. H. A. Haynes, Prof. F. C. N. Hedebol, Mr. Howard E. Jenkins, Dr. Otto E. Koegel, Mr. F. C. Lewis, Mr. Cyrus R. Meyer, Dr. Austin R. Middleton, Mr. Joseph Miller, Dr. George E. Neuhaus, Mr. H. G. Ramsperger, Mr. Frederick W. Simonds, Prof. Leon H. Strong, Mrs. P. W. Whiting, Dr. P. W. Whiting, Mrs. A. E. Wiggam, Mr. A. E. Wiggam, Mrs. Roger Wolcott, Prof. Charles Zeleny.

4. The following resolutions were formally voted by the Association:

(*a*) "*Resolved* that it is the sense of the Eugenics Research Association that Germany should be granted membership on the International Eugenics Commission."

(*b*) "*Resolved* that in the absence of the representative of the International Eugenics Commission, Dr. Charles B. Davenport be given the delegate's proxy with authority to use as he sees fit at the October, 1922, meeting at Brussels."

(*c*) "*Resolved* that the President of the Eugenics Research Association be authorized to appoint Dr. Irving Fisher and Dr. Charles B. Davenport as representatives of this organization to negotiate a plan of union or coöperation with the Eugenics Society of the United States of America; that the representatives of this Committee be instructed to report to the next meeting of the Executive Committee of this Association."

At 4:30 P.M. the President declared the meeting adjourned.

THE NEW BELGIAN EUGENICS OFFICE.

Under date of June 4, 1922, Dr. A. Govaerts, Secretary of the Société Belge d'Eugénique, and who spent eight months, from September, 1921, to May, 1922, studying the organization of eugenics in the United States, writes that efforts to establish a governmental eugenics office in Belgium have been successful. The new office will be located in the Institute Solvay in Brussels and will be supported by the government. It has been decided to provide regular courses of lectures in eugenics in the State School of Social Service. This school is an organization which prepares its students to undertake actual social service in connection with societies and institutions devoted to charity, the protection of children, and other welfare activities. Professionally, the students of this school will, in the future, be trained, not only as visiting nurses and social workers, but also as eugenical field workers. Dr. Govaerts will organize and give the courses of lectures in eugenics. In general, the courses will be modeled after the instruction provided for the annual Training Corps of the Eugenics Record Office. Closest contact will be maintained between the Belgian and the American organizations.

In Dr. Govaerts' first course of weekly lectures, the following subjects will be treated: Meaning of Eugenics; Laws of Heredity in Plants, Animals and Man; Selective Matings; The Relation between Natality and Mortality and the National Welfare; The Technique of Eugenics: The Field Worker's Interviews and Questionnaires, Charting Family Pedigrees, Tracing the Descent and Recombination of Human Traits in Actual Pedigrees, Mental and Physical Measurements in Man.

Dr. Govaerts writes further that the Belgian Eugenics Society feels that this new eugenics office, with its official governmental support and acting in coöperation with the Solvay Institute for social studies, opens up a great and promising field for eugenical activity in Belgium. He very graciously states that Belgian eugenicists are deeply indebted to the Eugenics Record Office for the service rendered in aiding the Belgian Society to establish its new office. Dr. Govaerts' enterprise has the best wishes of American eugenicists.

NOTES AND NEWS.

Miss Jean Weidensall has been appointed to a Research Assistantship in Clinical Medicine at the Cincinnati General Hospital.

Dr. C. C. Nutting is in the Fiji Islands on a scientific expedition from which he expects to return to Iowa City about the middle of September.

Dr. Chester L. Carlisle of the U. S. Public Health Service is in charge of the Neuro-Psychiatric work of the U. S. Veterans' Bureau comprising the states of Illinois, Wisconsin and Michigan, with headquarters in Chicago.

Dr. F. L. Hoffman, member of the Executive Committee of the Eugenics Research Association and formerly connected with the Prudential Life Insurance Company, is now Dean of Advanced Department of the Babson Institute, Wellesley Hills, Massachusetts.

A letter from Professor J. Moldovan, director Institutul de Igienă si Igienă Socială of the Universitatea din Cluj (Kolozsvar), Rumania, states that a section of eugenics has been established at the Institute. The Institute would be glad for publications germane to its work.

EUGENICAL NEWS

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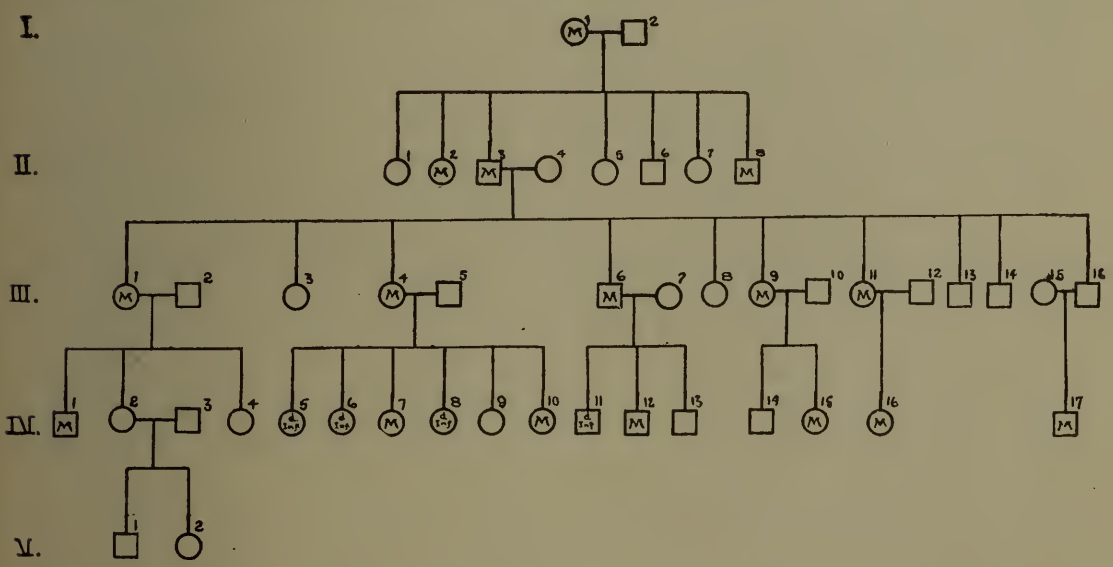
INHERITED MATHEMATICAL ABILITY.

The accompanying chart gives the pedigree of a Scotch-Irish family with special capacity in mathematics, though not of the creative order. II 3, an Irish immigrant who worked as farm-hand and later became a painter, was always working at arithmetical calculations, also algebra and geometry. He often worked with his wife until midnight over some mathematical problem, until eighty-one years of age. His mother and two brothers are said to have been markedly mathematical.



Generation III. Five out of ten are markedly mathematical. III 1 had the facility of a lightning calculator. III 4 taught mathematics before marriage and has tutored in it since. Two of her surviving three children are excellent in mathematics; thus IV 10 is specializing in the subject at Cornell. III 6 is a clergyman who was especially proficient and interested in mathematics including the calculus. One of his sons is most proficient in mathematics. III 9 held high rank in mathematics and could add three columns of figures as rapidly as they were put on the board. Her daughter has a special interest in mathematics. III 11, best student in a class of seventy; especially fond of mathematics; has a daughter who took the mathematics prize and heads her class in high school. (E. R. O., A. 4562–14.)

DOCTOR BELL: EUGENICIST.

Dr. Alexander Graham Bell, who died at Beinn Bhreagh, on August second, was for several years chairman of the Board of Scientific Directors of the Eugenics Record Office, beginning with its foundation. He was an early supporter of eugenical field work. At his Volta Bureau he maintained a Genealogical Record Office. He was honorary president of the Second International Congress of Eugenics. In his death eugenics suffers a severe loss.

INABILITY TO SPEAK ENGLISH.

The United States Bureau of the Census has recently announced the results of its analysis of the Census of January 1, 1920, in reference to inability to speak English. According to this announcement, of the foreign-born white population of the United States ten years of age and over, 1,488,948 persons or 11 per cent. of the total were reported as unable to speak English. In 1910 the same investigation found 2,953,011 foreign-born white persons ten years of age and over or 22.8 per cent. of the total who were returned as unable to speak English. Two factors seem to have contributed largely to this great decrease during the decade. First, the number of non-English-speaking immigrants who arrived during the decade was much smaller than during the preceding decade. Second, the great majority of immigrants of the decade ending 1920 arrived prior to August 1, 1914, and consequently many of them had time to learn English before the census of 1920.

The percentage unable to speak English, among the foreign-born white population ten years of age and over, in these states was as follows: Texas, 51.7 per cent.; New Mexico, 49.4 per cent.; Arizona, 51.9 per cent. In no other state was the percentage so high as 20 per cent., and in only two other states, West Virginia with 18.3 per cent. and Florida with 18.8 per cent., was it higher than 14 per cent. The smallest percentages were found in the following states: South Carolina, 1.8 per cent., Georgia, 1.8 per cent., Kentucky, 2.2 per cent., North Carolina 2.7 per cent., District of Columbia, 2.8 per cent., Washington, 3.2 per cent., Oregon, 3.3 per cent., Tennessee, 3.3 per cent., Montana, 3.4 per cent., Virginia, 3.7 per cent. In all other states the percentage ranged from 4 per cent. to 14 per cent.

Linguistic assimilation widens the range of personal acquaintance and consequently of mate-selection, and thus is an important factor in racial fortunes.

THE RIGHT TO MARRY.

The Department of Health of the State of New Jersey, through its Bureau of Venereal Disease Control, has issued a pamphlet entitled "The Right to Marry." It is of interest to eugenicists for many reasons. First, social hygiene is a special form of health attention which, like every other special hygiene, affects individual efficiency. Just how much the personal reaction to special hygiene depends upon hereditary background, and how much upon environmental conditions, has yet to be determined. But social hygiene makes a special appeal to eugenics because it affects not only the individual personally; it is a great factor in injuring or destroying the reproductive capacities of certain strains. It is thus a matter of great eugenical concern. Further, individuals who, so far as their hereditary constitutions are concerned, may be potential parents of splendid children, may on the other hand, because of venereal infection of one or the other parent, produce infected and malformed children, and may thus destroy not only individual efficiency but blood strains or hereditary traits which are rightly the possession of the race.

The State of New Jersey, in its bulletin, does well to set forth a typical and classical story of the feeble-minded Kallikak family and also to describe the ravages of venereal infection and how the latter may be prevented and treated. On the front page of the pamphlet appears the

following extract from the New Jersey laws as amended during the session of 1921, "An act concerning marriages."

". . . no license to marry shall be issued when either of the contracting parties, at the time of making the application, is infected with gonorrhea, syphilis or chancroid in a communicable stage or is under the influence of intoxicating liquor or a narcotic drug, or is an imbecile, epileptic, or of unsound mind, nor shall any such license be issued to any person who is or has been an inmate of any insane asylum or institution for indigent persons, unless it appears that such person has been satisfactorily discharged from such asylum or institution."

CONDITIONS AND THE RACE.

Dr. Saleeby has long been an ardent student of eugenics, having been inspired by Francis Galton himself. But he is also a physician and is impressed by the importance of "conditions" of life. In his latest book he combines these two trends and thinks of things that affect the individual as affecting the race because of their effect on the germ-plasm. So he finds the eugenic prospect bad for Great Britain because of drunkenness, of lack of recreation for the masses, of venereal disease, of smoky air, of tuberculosis. He finds the prospect better for the United States and Canada. The book contains essays on many other subjects. These essays were clearly written at various times and on various occasions. All are readable and important. But we must say that we think eugenics should not be mixed up so intimately with euthenics.

C. W. Saleeby, 1921. The Eugenic Prospect, National and Racial. N. Y., Dodd, Mead & Co. 239 pp.

APPLIED EUGENICS.

Again a zoöligist has tackled with success the consideration of so important a sociological subject as the question: Whither are we drifting? First is discussed the hereditary basis of eugenics and then, briefly, what is known of inheritance of mental defect and disease. In this latter chapter one feels that the query of the author as to inheritance of "insanity" is not fortunately framed, inasmuch as "insanity" is a legal and not a biological term. Next is discussed the heritable basis of crime and delinquency. After pointing out the large percentage of inferior intelligence and of insufficient moral control in delinquents, the author says: "The bad environment . . . makes paupers, vagrants or criminals of many who, otherwise, might have led useful lives." If by "many" is meant many per hundred, one feels that the author leans over backward in his desire not to overemphasize the importance of constitutional factors. Next, mental ability and the birth rate, natural selection in man, consanguineous marriage, the damaging of germ cells by injurious agents, the order of birth in relation to defect and effect of industrial development on the race are all discussed. This general impression the reviewer has gained: first, that Professor Holmes has published a very useful book; second, that in the part relating to experimental or statistical facts found by others, his caution is in contrast with a greater freedom of expression in matters on which we have fewer quantitative data. Most of all the impression is left that the author aims to be judicial. And in this he has succeeded. The book is heartily recommended to all eugenicists.

Samuel J. Holmes, 1921 The Trend of the Race. N. Y., Harcourt, Brace and Co. 396 pp.

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August 1922

ACCESSIONS TO ARCHIVES OF THE EUGENICS RECORD OFFICE, JULY, 1922.

Biographies, 1.
Collective Biographies, 2.
Town Histories, 2.
Record of Family Traits, 259.
Individual Analysis Cards, 958.
Family Tree Folders, 14.
Pages of Special Traits, 279.

THE TUKE FAMILY.

The Tukes were a family of English philanthropists. The first member of prominence was William Tuke (1732–1822). Then followed his son Henry (1755–1814), then Henry's son Samuel (1784–1857), then Samuel's son James Hack (1819–1896). The family was especially noted for their interest in the insane and the dependent classes. Their humanitarian ideals and practical methods aided greatly in causing the change of treatment of the insane from one of repression to practical kindness, but from the eugenical point of view, James Hack Tuke is noted because his principal energies were directed toward aiding the poorest peasant families in Ireland to emigrate to the United States. He was actuated by the highest motives; he desired to aid the peasant population of Ireland, but, in relieving a famine condition in Ireland, he was instrumental in contributing to the reproductive human stock of the American population a number of families who, in great part, were of little intrinsic worth, and who perhaps would have failed to survive under the severest conditions during the Irish potato famines. Much fine American blood arose in Ireland, and if Tuke had promoted the removal to America of the best naturally endowed families of Ireland, he would now be looked upon as a benefactor to American blood, but because he considered the New World as an asylum, his influence must be rated as cocogenic.

NEGRO CAPACITY.

The negroes and mulattoes constitute about one tenth of the population of the United States. Among them, especially among the mulattoes, leaders have appeared, including persons with special capacity in music, painting, sculpture, acting, oratory, preaching and teaching These capacities are, for the most part, those for which the negro is notorious—emotional expression and speech capacity. These have been combined in the mulatto with intellectual elements. The author of this book gives brief biographies of several negro leaders—Booker T. Washington of Tuskegee; Charles Roman, Professor of Physiology at Meharry Medical College for negroes; Nannie H. Burroughs, head of a training school for African Missionaries; William D. Berry, a pastor at Springfield, Mass.; Mrs. Janie Barrett, organizer of a home for wayward colored girls; John Pierce, who does agricultural extension work; Mrs. Maggie L. Walker, of Richmond, a banker, and others. The range of occupations in which the negro finds success is expanding.

L. H. Hammond, 1922. "In the Vanguard of a Race." N. Y., Council of Women for Home Missions. 176 pp. 75c. cloth; 50c. paper.

THREE MURDERERS.

Why does a man "kill" another? There are almost as many reasons why as there are murderers. A good classifier can, indeed, form groups of these reasons. But first it is necessary to analyze thoroughly typical cases; and this Dr. Briggs has done in an important book. Three cases are considered. The first is that of B. G. Spencer, who entered many houses in Springfield, Mass., and in one of these shot and killed a school mistress, who was merely screaming and offering no resistance. His family history contains 12 marked neurotics or insane. His father was subject to attacks of violent anger, as was the murderer. The evidence gave a picture of a young man who lived a seemingly normal life but who had strong periodic impulses to enter houses, equipped with mask and pistol, take things in them, usually of little value, and take them often in a highly sensational and perfectly reckless manner. The screaming of the school mistress and her companions seems to have shaken him and led him to shoot. He was of the double-personality type.

Second is Czolgosz, the slayer of President McKinley. He seems to have been a nearly typical schizophrenic or dementia præcox case. He was secretive, seclusive, anti-social and suspicious.

Third is the Rev. Clarence V. T. Richeson, who gave some crystals of cyanide of potassium to a young woman who was pregnant by him. She took the crystals to induce abortion, with quickly fatal results. Richeson was subject to erotic periods in which he lost control and probably also full consciousness. These periods seem to have been followed by nervous crises. His family stock is highly neurotic.

In the legal handling of these criminals the question of "responsibility" is stressed. What is meant by the word? It seems to be a very vague term; one that we do not apply to dogs or apes. It would be an interesting bit of historical research to try to ascertain the origin and development of this idea of responsibility.

L. V. Briggs, 1921. The Manner of of Man that Kills. Boston, L. G. Badger. 444 pp.

A COMPENDIUM OF EUGENICS.

German men of science have long been noted for their special qualifications for compiling compendia, so we are glad to receive a copy of a new "Grundriss" of heredity and eugenics, in the production of which 3 eminent scholars have contributed. The work is in two volumes. Band I deals with human heredity. The first part is a treatise on genetics by Professor Baur. This is largely devoted to the familiar Mendelian analysis; about 10 pages are devoted to linkage, "Faktoren-Koppelung" and to crossing over, or "Chromomeren-austauch." The anthropologist, Eugen Fischer, follows with an account of racial differences in man. Then Dr. Lenz takes up the subject and treats of pathological inheritance, inheritance of genius, human selection and the applications of eugenics. The last two matters are discussed in 230 pp. in Band II. Altogether the work is a useful addition to our too short list of compendia on eugenics or race hygiene, as our German and Scandinavian friends prefer to call it.

E. Bauer, E. Fischer, F. Lenz: 1921. Grundriss der Menschlichen Erblichkeitslehre und Rassenhygiene. Bd. I, 305 pp.; Bd. II, 251 pp. München. J. F. Lehmann. Price, $2.60.

RACIAL TRAITS IN ATHLETES.

Elmer D. Mitchell, Ann Arbor, Michigan, contributes a paper to the April and May, 1922, issues of the *American Physical Culture Review*, in which he analyzes the racial characteristics which are most dominant in athletes of each of the principal races which have contributed family stocks to the American population.

This subject is one that lends itself to quantitative results, though this opportunity has not been made use of by the author. The author shows much insight into race psychology.

"The Scandinavians are tall and strong with marked aptitude for athletic prowess."

"The Swede—he can be used as a representative of the larger race—is a plodding, slow-thinking, and law-abiding individual. He is not so submissive as the German. These traits, coupled with a willingness to learn, make him good material for the American coach and for . . . team play. . . ."

THE LATIN.

"I have grouped the French, Italian, and Spanish together. . . . The peculiar Latin trait of placing child-like faith in higher authority, of not seeking to penetrate the invisible, makes him a lover of external show, pomp, and material rites rather than of individual faith."

"The French people do not care for the complicated baseball, cricket, or football. Instead, we find them interested in such exercises as running, jumping, croquet, cycling, fencing, and handball. All these, indeed, involve skill, but no unified team plays."

THE DUTCH.

"Dutch players are hard workers . . . persevering, and steady. . . . Basketball is a favorite sport with them, although they make just as good athletes in football or baseball. Track and field events seem to attract them the least."

THE POLE.

"Playground directors all refer to the Polish gang as being one of the most troublesome to handle. . . . He is Slavic by blood, but German by environment. . . . He lacks . . . initiative."

THE NEGRO.

"A Colored youth who remains in school until the age of interscholastic competition is usually of the bright industrious type, and the same qualities show when he participates in athletic games. . . . The negro, as a fellow player with white men, is quiet and unassertive; even though he may be the star of the team he does not assume openly to lead. . . . The great prizefighter, Jack Johnson, always jested and carried on repartee while he was fighting." . . .

"Physically, he is large and inclined to be heavier in the upper than in the lower part of the body. Usually long arms, narrow hips, high placed calves, and flat feet are distinctive racial peculiarities. . . . Temperamentally, he is inclined to be lazy. Other minor traits are his susceptibility to superstition, his capability for self-devotion or hatred, his imitativeness, his love of frankness and especially his love of praise."

THE JEW.

"The Jew thrives amidst the tense environment of competitive business and city strain. . . . The Jew's environment early taught him the lesson of being physically unobtrusive; but beneath all, there is a latent courage—a courage which needs the prod before it shows, as the Jew faces odds when he has to fight alone. . . . Rebuffs or unpopularity do not depress the Jew. Long racial experience has inured him to them. . . . The average Jew is an unpopular team-mate; he is self-assertive, individualistic, and quarrelsome. This quarrelsome trait is easily seen by watching a group of Hebrew children on the playground." . . .

"Along with boxing and dancing, gymnastics and basketball are popular, all of them types of athletic exercise demanding dexterous footwork and dodging ability, and carried on indoors. Basketball is easily their favorite sport."

THE INDIAN.

"Physically, the Indian has a tall, well-knit structure. His one failing as an athlete is psychological, in that he is not at home outside of his own environment. . . . The negro is will-

ing to accept an inferior status; the Indian is not. . . . Coaches agree that the Indian cannot stand reverses; that he will play sensationally while winning, but give in easily before setbacks; also that the Indian teams do not do well away from home. Indian teams lack persistent effort, and training or practice quickly become irksome if not relieved by novel methods. . . . The Indian inherits a capacity for endurance running. Lacross is a running game invented by the Indians. . . . Longboat is a typical Indian marathon runner. . . . He is stoical in enduring pain. He is crafty, with the sense acutely developed. He nurses a wrong. He is cruel."

THE GREEK.

"The Greek has a noble athletic heritage. . . ."

"While the Greek race has been invaluable to human progress, the Greek of to-day has nothing new to add. . . . In team games, the Greek appears awkward, lacking in coördination of mind and muscle."

THE ORIENTAL.

"Taking the men of China, Japan, and the Philippines separately, we find the following differences:

"The Jap is the most progressive. He is intelligent, brave, enthusiastic, and persistent. The last-named trait is shown by the dogged persistence which it must take to master such marvelous feats of juggling and balancing as they perform on the vaudeville stage. He is curious and observing, and eager to learn." . . .

"The Chinaman is more deliberate, conservative, and much more difficult to persuade than the Jap. . . . In track the Chinese seem to excell in events requiring bodily balancing skill, the pole vault in particular."

"The average Filipino is of medium but well-knit stature. He is brave and warlike. He has the quality of enthusiasm and, because of an intermixture of Spanish blood, displays his emotions very visibly as compared with the yellow race."

THE SOUTH AMERICAN.

"The Latin American has inherited an undisciplined nature. The Indian in him chafes at discipline and sustained effort; while the Spanish half is proud to a fault and resentful of fancied slights. His better side shows him freedom-loving and often generous to a fault; and his pride gives him a certain fine distinction." . . . Soccer and tennis are the games they are most apt to participate in."

THE SLAV.

"The Russian is a poor athlete. Only in wrestling and gymnastics has he shown any special aptitude." . . .

"Whereas the men of other nationalities find recreation in sports and pastimes, the Russian finds his in the wild abandon of the dance. One almost instinctively associates the word 'Russian' with the word 'ballet' when he hears the latter mentioned. Is it not a strange contradiction, too, that the people who enjoy vigorous games act leisurely in the dance?"

THE FINN.

"While the Russian has been belittled as an athlete, the same case does not hold true of the Finn, his next-door neighbor. . . . Like the Russian he does not possess the team instinct." . . .

"The Finn surprised the whole world by his showing in the last Olympic games. . . . Finland captured the first four places in the javelin throw, and was possibly kept from making more only by the rule which limits each nation to four contestants in any one event. . . . The events in which he excels are all of the individualistic type."

CONCLUSION.

"In almost every way athletics are representative of the customs and traditions of a people. They certainly are a means of determining the trend of a nation's life and a mirror of respective national character can be found in the easy-going, long-drawn-out, conservative and individualistic English game on the one hand, or the high-strung, tense, changing, and success-seeking American game on the other. Decadent nations find enjoyment in bullfights, cockfighting, professional wrestling, and the like; autocratic nations specialize in the disciplined, machinelike, and systematic gymnastics; and democratic nations produce sports. All through history, democracy has been accom-

panied by an interest in amateur sports."

NOTES AND NEWS.

A study of the sex-ratio in births of the countries involved in the late war, both before, during and since the war, reveals, E. R. Shaw finds (in *Jour. Amer. Statist. Assn.*, June), no evidence of any excess of male births following the war.

Mrs. Walter M. Newkirk, '12, has been appointed delegate of the American Association of University Women to the International Conference of University Women which meets in Paris. Mrs. Newkirk will attend also the Fifth International Birth Control Congress which meets in London July 11–14, 1922. The chairman of the Eugenics Section of this Congress is Professor E. W. McBride.

Dr. Aaron J. Rosanoff, who, since 1901, has been Clinical Director of the Kings Park State Hospital, Kings Park, N. Y., has resigned from this position and is now engaged in private practice in neuropsychiatry in Los Angeles. Dr. Rosanoff is also preparing the sixth revision of his "Manual of Psychiatry." His present address is 518 Marsh-Strong Building, Los Angeles, California.

Mrs. Mary T. Watts, who has done much to promote baby health contests in the West, is now encouraging the family history studies in the eugenics building which is carried about from fair to fair in some states west of the Mississippi. The slogan is "Fitter families for future firesides." Prizes are given for the best family records instead of merely physical condition of the babies.

Dr. Ramos of Havana writes that, political conditions in Cuba having been stabilized, he is reporting to the government about the work of the Second International Congress of Eugenics and the importance of the establishment of a eugenics station in Cuba. Since the Latin-American Medical Congress is to be held in Havana during November, it is hoped to enlist an interest in eugenics among the delegates of those countries.

Dr. Franz Boas publishes a plan for an anthropometric investigation of the population of the United States, in the June number of the *Journal of the Amer. Statistical Assn.* He points out difficulties and desiderata. There is no doubt that, on account of the presence among us of all European nationalities in great numbers and of hybrids between them, the United States offers peculiarly favorable opportunity for research on race mixtures.

ALCOHOL AND GERM CELLS.

In five men who died of severe alcoholic intoxication (all cases studied by Carl V. Weller, Univ. of Michigan, and reported in *Proc. Soc. Exp. Biol. and Med.*, Dec., 1921), there was revealed profound testicular modifications. The sperm-producing epithelium was vacuolated, cell-division was atypical, and sperm-formation was abnormal. This confirms earlier deductions as to alcoholic blastophthoria.

THE MULATTO TO HIS CRITICS.

Joseph S. Cotter, Jr., gives this answer to the critics of the mulatto:

"Ashamed of my race?
And of what race am I?
I am many in one.
Through my veins there flows the blood
Of Red Man, Black Man, Briton, Celt, and Scot,
In warring clash and tumultuous riot.
I welcome all,
But love the blood of the kindly race
That swarths my skin, crinkles my hair,
And puts sweet music into my soul."

EUGENICAL NEWS

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THE ENDOCRINOPATHIC BACKGROUND OF A PSYCHONEUROSIS.*

By Edith R. Spaulding, M.D.

A large number of psychoneuroses show, besides nervous and mental symptoms, much evidence of endocrine imbalance. In many cases, especially among children, the basis of the deviation of personality found appears to be the result of an endocrine imbalance. Adler's theory of such relationship seems frequently to be borne out in the author's experience. In spite of the fact that more definite syndromes, such as hyperthyroidism, cretinism, Froelich's syndrome or status thymico-lymphaticus, are often found associated with various mental attitudes, still the glandular imbalance found may be less marked than any of these and more complex. But because the deviations are slight, if they, as well as the associated mental attitudes, can be recognized and corrected, especially during the individual's childhood, he may be brought to a higher state of mental and physical efficiency and many psychotic symptoms may be prevented.

In the case described there was a persistent thymus with dyspituitary, dysthyroid and supra-renal factors. The lack of tone of the abdominal wall and of the unstriped muscle of the intestine, the great fatiguability, the tendency to diarrhœa that followed excitement and was associated with palpitation and the feeling of great apprehension and tension, all largely due to glandular dysfunction, suggested to the patient the type of escape to which she might have recourse when she was confronted with situations in life which she felt incapable of meeting. This feeling of inadequacy was doubtless due, in itself, to a glandular insufficiency, which had resulted in a retardation of her emotional development.

The heredity in this case showed many endocrinopathic symptoms, which in turn were associated with various deviations of personality and psychoneurotic conditions.

While it is impossible to untangle the intricate relationship that undoubtedly exists between personality development and endocrine conditions, it is important to consider both the mental and the glandular aspects in the therapy of each case treated. The case described responded well to a combination of treatment that, on the one hand, established a better endocrine balance and increased the patient's physical capacity, and, on the other, through mental analysis, corrected the patient's attitudes that had resulted from her unconstructive attempts at compensation for her glandular inadequacy.

* Abstract of paper read before the Eugenics Research Association, Cold Spring Harbor, Long Island, New York, June 10, 1922. The complete paper will be published in the *Woman's Medical Journal*, August, 1922.

AN INTELLECTUAL NAVAL OFFICER.

Seaton Schroeder, born in Washington, D. C., Aug. 17, 1849, was graduated from the Naval Academy in 1868 and became midshipman on the U. S. S. *Saginaw*, in Alaskan waters. He served two years with the North Pacific squadron, a year or so in the West Indies, then went with a

"Transit of Venus" party to Tasmania and Capetown. He was then placed on hydrographic work on shore and in the Mediterranean, in the course of which he was associated with Capt. H. H. Gorringe in the removal of the Egyptian obelisk from Alexandria to New York. He also served as navigator on the *Albatross* of the U. S. Fish Commission for two years, to 1885. Next he was attached to the Office of Naval Intelligence, then put in command of the *Vesuvius* with its pneumatic guns. He commanded the *Massachusetts* off Santiago de Cuba during the Spanish-American war; was Governor of Guam, 1900–03; was appointed Chief Intelligence Officer; commanded the *Virginia*, 1906–09 (in which he participated in the cruise of the fleet around the world); and then was made Commander-in-Chief of the Atlantic fleet. Retired in 1911, he still occupied himself in naval matters, revised the tactical system and signal books and, during the war, served in the hydrographic office, and later prepared a system of transliterating Russian place names.

Schroeder is an example of the intellectual naval officer and diplomat. His term of service fell in a period between two great wars—the Civil and World Wars—during which the navy played largely a diplomatic rôle. Schroeder's speeches in foreign countries and languages were happy and tie-binding. As Governor of Guam he harmonized all factions. His father was American Minister to Sweden, in Stockholm for eight years; his mother's father, Winston Seaton, was, during ten terms, Mayor of Washington. He had also the capacity for effective authorship, as seen in his "Fall of Maximilian's Empire" and the present work. His intellectual traits led to his selection as chief intelligence officer; and his gift of language led to his work in Russian transliteration. He has inventive capacity, as when he commandeered all boat oars and boat hooks to form a sort of corduroy road to carry cannon over a marsh; and as shown in his invention of a gun, of gun sights, of methods of lowering and transporting a huge obelisk. His sense of taste is keen: the mango, the mussels of Kerguelen, the milk at Novum Ilium, the box of goodies from friend Gorringe—all are remembered because of the emotions they aroused. For the rest, great accuracy made him pre-eminent as surveyor and navigator; foresight led him, in 1903, to appreciate the importance of the submarine and get it authorized as an arm of the navy. His good breeding and good humor have brought him firm friends; and good health and a love of work have enabled him to achieve large things in fifty naval years.

Seaton Schroeder, 1922. A Half Century of Naval Service. New York: Appleton & Co. 443 pp.

THE WAR'S MOST DISTINGUISHED PRIVATE.

Alvin C. York was born Dec. 13, 1887, at Pall Mall, Fentress Co., Tennessee. He came to be the most expert rifle-shot that the mountain region had ever held, in a people among whom firing at a target is a principal competitive sport. He was drafted into the war. As a corporal he went with a detachment of seventeen men to clean out a machine gun battalion on a given hill. Six of his men were killed and three wounded. A group of officers was captured and the prisoners watched by seven men. York picked off so many of the machine gun battalion that 90 Germans surrendered to him. Consoli-

dating his hundred prisoners, he marched them to another machine gun nest and gathered up 30 more prisoners. Thus he had a total of 132, including a major and 2 other officers. General Foch said, in decorating him: "What you did was the greatest thing accomplished by any private soldier of all the armies of Europe." Sergeant York was not spoiled by the great praise that followed his achievement. Despite offers of hundreds of thousand of dollars, he returned to his home and suggested that any monetary gift to him should constitute a fund for education of the mountain whites.

York is the product of a favorable environment acting on a good heredity. His training in rifle shooting has been mentioned. Shooting at the heads of turkeys which had been tethered behind a big log 150 yards away was good training for German heads bobbing above trenches or around trees. His father was a blacksmith and hunter, the son of Uriah York, a soldier of the Mexican War and in the Federal army in the Civil War. During the winter months Uriah taught the local school. A love of knowledge and analysis came from this side of the house. Alvin's mother's people were descended from the "Longhunter" Conrad Pile who laid claim, by virtue of discovery, to Pall Mall in the "Valley of the Three Forks of the Half." He became a wealthy trader and extensive land and slave owner. At the time of his death in 1849, he was the most powerful personality in Fentress County. Of his grandsons, two were shot to death in the feuds aroused by the Civil War. A granddaughter married William Brooks who killed his opponent first and was in turn slain. His daughter, Mary Brooks, is the mother of Sergeant York. This side brought moral courage and pertinacity, and a tactical capacity, which showed when he used his hundred prisoners to capture the remaining machine gunners.

Samuel K. Cowan. 1922. Sergeant York and His People. New York: Funk & Wagnalls.

JACOB H. SCHIFF.

Jacob H. Schiff was born in Frankford-am-Main in January, 1847. He came to America in 1865, entered a brokerage house in New York in 1875, became a member of the banking firm of Kuhn, Loeb and Co., and eventually its head. Here he entered into the work of financing railway enterprises at a time of the country's most rapid expansion. He joined forces with Edward H. Harriman, thus making "the most powerful, the most aggressive and the most successful" railway combination that America had ever known. Similiarly he was associated with J. J. Hill and A. J. Cassatt and helped finance many of America's greatest industrial organizations. He helped finance the Japanese in their war against Russia. He was a public-spirited citizen and a generous giver to large philanthropies like the Montefiore Home, Henry Street Settlement, Semitic Museum at Harvard. He was devoted to his religion, and gave especially to his own sect and sought to secure for them, everywhere in the world. freedom of action and opinion.

Schiff had unerring financial instinct, an eagerness to assume responsibility, strong confidence in his judgment, but a willingness to be shown his error. He had a "priestly high temper" which disappeared in later life. He was prompt, saving, frugal in meals, a lover of music, pictures, natural beauty and travel.

Cyrus Adler, 1921. Jacob Henry Schiff; a biographical sketch. N. Y., Amer. Jewish Committee. 69 pp.

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ACCESSIONS TO ARCHIVES OF THE EUGENICS RECORD OFFICE, AUGUST, 1922.

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FIELD REPORTS:

Miss Devitt: description 965, charts 175.

Miss Mead: description 54, charts 7.

Bureau of Juvenile Research: description 258, charts 19.

BIBLIOGRAPHY OF THE EDWARDS FAMILY.

Many requests are entered for references to books and papers on the Edwards family. In order to meet these requests, the New England Historic Genealogical Society has named the following list of books in their library:

Jonathan Edwards Family—A. E. Winship.

Desc. of Alexander Edwards—Elizabeth Edwards Gifford, 1886—Auburn, N. Y.

Hon. Bulkeley Edwards & His Desc.—Margaret R. Riley, 1896—Cromwell, Conn.

Hist. Sketches Edwards & Todd Family—George H. Edwards, 1894—Springfield, Ill.

Jukes Edwards—A Study in Education & Heredity— A. E. Winship, 1900—Harrisburg, Pa.

Timothy & Rhoda Ogden Edwards of Stockbridge, Mass. & their Desc.—Wm. H. Edwards, 1903—Cincinnati.

The Edwards Family—James Thos. Edwards, 1903—Randolph, N. Y.

The Edwards Family—John Harrington Edwards, 1907—Brooklyn, N. Y.

Genealogical Record Desc. John Edwards—Dwellyn Nathaniel Edwards, 1916—Bangor, Me.

Ancestors of Maj. Gen. Clarence R. Edwards—Gilbert Chapin, 1920—Hartford, Conn.

Mem. Volume Edwards Family Meeting Stockbridge, Mass.—Jonathan Edwards Woodbridge, 1871—Boston.

EUGENICS IN JAPAN.

Professor Taku Komai, Assistant Professor of Zoölogy in the Kyoto Imperial University, Japan, writes as follows after receiving a number of publications of the Eugenics Record Office:

"It has been my desire and plan to collect materials for the study of eugenics among the Japanese, and I am doing some preparatory work along that line. Very sorry to say nobody has done any original work in this study in our country, but there are several books published by Japanese which are pretty widely read. I hope and believe that in the near future, there will be many who take up this study.

"I enclose my application card for membership in the Eugenics Research Association."

Two thirds of the foreign-born population of Texas, New Mexico and Arizona are natives of Mexico.

AN INVESTIGATION OF THE INTELLIGENCE OF MEXICAN AND FULL AND MIXED BLOOD INDIAN CHILDREN.

By Thomas R. Garth,
University of Texas.

To the student of eugenics the question as to what influence racial germ plasm has on the intelligence of individuals and groups is one of great importance and interest. During the last two years the writer has been giving the National Intelligence Tests to Mexicans in San Antonio, Texas, and to Indians in the United States Indian Schools at Chilocco, Oklahoma, and Albuquerque, New Mexico. The Indians were tested during the course of an expedition made possible by the courtesy of the Grants Committee of the American Association for the Advancement of Science. Elsewhere we have made a very brief preliminary report of the results of handling the data obtained by the administration of the tests.

But the results of the intelligence ratings, some of which we give here, go to show that in terms of an average, median, and overlapping for respective age-blood-groups, the ranking of the blood groups reads thus, placing most intelligent first and least intelligent last:

Rank.

1. Mixed Bloods.
2. Mexicans.
3. Plains and Southeastern Full Blood Indians—Nomadic.
4. Plateau or Pueblo Full Blood Indians—Sedentary.
5. Apache and Navajo Full Blood Indians—Nomadic.

Because of the small number of cases, the results for Apache and Navajo groups are inconclusive.

Table Showing Average and Median Scores and Overlapping on Median of Plains and Southeastern Indians.

14 Yrs.	M. B.	Mex.	P.-S. E.	Pueb.	A. & N.
No. Cases.....	23	79	23	38	4
Ave.....	98.7	90.3	82.7	77.2	61.7
A.D.....	20	21	14	21.9	
Med.....	103.5	87.8	85	77.3	
Overlapping on Plains and S.E. Med....	78%	59%		42%	

15 Yrs.	M. B.	Mex.	P.-S. E.	Pueb.	A. & N.
No. Cases.....	16	60	30	44	15
Ave.....	119.9	92.8	86.5	81.4	67.6
A.D.....	20	21	22.7	21.9	33.5
Med.....	133	93.5	86	82.5	60
Overlapping on Plains and S.E. Med....	87%	63%		45%	20%

18 Yrs.	M. B.	Mex.	P.-S. E.	Pueb.	A. & N.
No. Cases.....	27	26	29	48	10
Ave.....	99.3	92.7	81.6	79	80
A.D.....	23.8	15.3	25.5	23.7	21.4
Med.....	97.5	91	83	78.5	79
Overlapping on Plains and S.E. Med....	71%	73%		43%	40%

M. B..... Mixed Blood.

Mex..... Mexican.

Plains. S. E. Plains and Southeastern Indians.

Pueb..... Pueblo.

A. & N..... Apache and Navajo.

EXPECTATION OF LIFE AT TEN YEARS OF AGE.

The Metropolitan Life Insurance Company made a special display of charts showing their analysis of this subject at the exhibit of the Second International Congress of Eugenics. Among the males at 10 years of age, the greatest expectation of after-life span (53.4 years) was recorded for Russian born males (mostly Jews). Males born in the United States of native-born parentage showed an expectation of 53.0 years. The expectation for other race stocks at age 10 for males was as follows: Italian, 51.9 years; English, Scotch and Welsh, 50.3 years; Germans, 49.4 years, and Irish, 38.7 years. Among females, the expectation of life at age 10 was greatest for persons born in the United States of native parentage (55.9 years).

In decreasing order, the expectation for females of the several stocks at age 10 was as follows: Native-born of native parentage, 55.9 years; Russians (mostly Jews), 55.8 years; Germans, 54.4 years; Italians, 52.9 years; English, Scotch and Welsh, 52.7 years, and Irish, 45.9 years.

By races and specific diseases, the analytical findings which lead to these conclusions are summarized as follows:

Russians (mostly Jews).

Among males of this group, standardized death rates at ages 10 and over were very much lower than among native born for tuberculosis and organic diseases of the heart. Cancer, pneumonia and Bright's disease death rates among these Russian born males were higher than among males born in the United States. Russian females showed a much lower tuberculosis death rate, a slightly lower cancer death rate, and higher death rates for heart disease, pneumonia, Bright's disease and accidents than did females of native parentage.

Italians.

Among males, the Italian born showed lower death rates than the native born for tuberculosis, cancer, heart disease and Bright's disease, but higher death rates for pneumonia and accidents. Italian born females showed higher death rates than the native born for tuberculosis, heart disease, and pneumonia, but lower rates for cancer, Bright's disease and accidents.

Germans.

The German born male population of New York State had a slightly lower tuberculosis death rate, but considerably higher death rates for cancer, heart disease, pneumonia, Bright's disease and accidents. German born females showed about the same relative position of the death rates for the principal causes of death in comparison with the native born, as did the German born males.

Irish.

The greatly decreased expectation of life among the Irish born males is very largely caused by the excessive death rate from tuberculosis. Irish born males in New York State, 1910, had a tuberculosis death rate of 472 per 100,000, as compared with 228 for native born males. There was very marked excess, also, in the death rates for pneumonia and accidents. The mortality from cancer, heart disease and Bright's disease was, likewise, very much in excess among Irish

born males. The Irish females showed excessive tuberculosis, heart disease, pneumonia and Bright's disease death rates. Cancer and accidents also caused significantly more deaths among Irish born females than among native born females.

English, Scotch and Welsh.

The tuberculosis death rate among both males and females born in England, Scotland and Wales was less than among males and females of native birth. For cancer, heart disease, pneumonia, and accidents, there were, however, higher death rates among the British born than among the native born. For Bright's disease, the death rates of British born males were lower, and for females, higher than in the corresponding groups of the native born population.

The death rate data in these charts, and in the tables which accompany the formal paper offered before the Congress, were prepared from crude population and mortality compilations made by the Census Bureau. They are practically the only material conveniently in form for study by eugenists of racial mortality for recent years in the United States.

MARRIAGE REGULATION IN NORTH CAROLINA.

Chapter 129 of the Public Laws of 1921 for North Carolina provides that no license to marry shall be issued to any applicant except upon the presentation of a certificate "showing the nonexistence of any venereal disease, the nonexistence of tuberculosis in the infectious states, and that the applicant has not been adjudged by a court of competent jurisdiction, an idiot, imbecile, or of unsound mind." The law applies with equal force to both males and females. The certificate required may be executed by any reputable physician licensed to practice medicine and surgery in the state and who resides within the county in which the license to marry is applied for, or such certificate may be supplied by the county health officer of such county, "whose duty it shall be to examine such applicants and issue such certificates without charge." A fine of not less than two hundred dollars, or an imprisonment of not more than six months, is provided upon conviction of knowing or willful misstatement in such certificates.

NUTRITIONAL STANDARDS AND DEVELOPMENT.

The Bureau of Educational Experiments undertook to supply extra meals to a number of undernourished school children in New York in order to learn what improvement, of a physical and mental sort, would result. Some of the children came from poor homes, others from those distinctly above the average. At the end of the first year little improvement was found in the nutrition class, chiefly because the experiment was tried in the late winter when weights are falling off for physiological reasons. Another year, more improvement was secured by experimenting during the autumn months when there is a general physiological increase of weight. The conclusion is gained that further research is necessary to determine: seasonal norms, geographic (climatic) variation of seasonal norms, relation of period of minimal weight to vitality and nutritive condition, relation of nutritional standards to age period, race variation. We are only at the beginning of a knowledge of human development, physical as well as mental.

J. L. Hunt, B. F. Johnson, E. M. Lincoln. 1921. Health Education and the Nutrition Class. N. Y.: Dutton. XV —281 pp.

AN AMERICAN GENETICIST IN JAVA.

Mr. Carl Hartley of the Bureau of Plant Industry, Department of Agriculture, Washington, and who is temporarily on the island of Java under contract with the Dutch Government, engaged in an investigation of the hereditary differences in resistance of peanut strains to bacterial wilt, is also greatly interested in racial and eugenical matters, and in the course of correspondence, states the following:

"There is, of course, a lot of interesting material here in Java for the study of race problems, with whites, Arabs, Chinese and various types of Malays all represented in considerable quantities. I have found it rather interesting to check up roughly the mental limitations of our Sundanese and Javanese laboratory assistants. But a white man has, of course, little chance to really learn much about the natives unless he lives for years in the kampoeng and has one or two native wives. The Malay idea that the plain unvarnished truth is a crude and inartistic thing makes conversation a poor way of getting information. The Malay language in use between natives and whites is a 'pidgin' hodgepodge, few whites being proficient in the very different native languages. Birth rate limitation certainly exists in many families; among the more intelligent I believe there is some voluntary limitation, but most of the limitations must be simply the result of the prevalent venereal infections. The head of the American hospital here has begun to make family records, as far as he can get them, regular parts of his case histories. Vital statistics, except perhaps the mortality figures of the public health service, are probably not very reliable, and they attempt to cover very few points. Raffles' old census when compared with the most recent Dutch enumeration indicates to me, at least, a surprising failure of the Chinese element to maintain itself proportionally despite the continuous immigration from China. One gets the impression that the Chinese, or the numerous Chinese half-casts if the pure Chinese prove unable to maintain themselves, are the people who will ultimately make history in the Archipelago. But however interesting things may be out here, the more contact I have with browns and yellows, the more I feel that the maintenance of civilization depends primarily on the whites, and that the important field for work is in maintaining the quality and integrity of the whites."

NOTES AND NEWS.

On July 14, Dr. A. H. Estabrook, '10, spoke on "State and County Organizations for Social Welfare and Their Work in Indiana" before the School of Education, University of Indiana, Bloomington, Indiana. On July 31, he lectured before the 1922 Training Corps of the Eugenics Record Office on "Eugenical Field Work."

Dr. Margaret W. Koenig, formerly in charge of Vocational Guidance of the Bureau of Child Welfare at Lincoln, Nebr., has been appointed by the U. S. Children's Bureau to a position in which she will have charge of the development of rural hygiene throughout the United States. This is one of the first appointments made under the Sheppard-Towner Act. Her first work will consist of collaboration with baby health activities in the state of Tennessee. Dr. Koenig plans soon to conclude her Indiana pedigree studies, to which she has devoted much time and study.

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VOL. VII. OCTOBER, 1922 NO. 10

SENSORIUM OF A PSYCHOLOGIST.

Hugo Münsterberg was born at Danzig, Germany, June 1, 1863, into a well-to-do family, which lived, during the summer, in the country. He studied, wrote poetry and fiction, enjoyed the drama and outings. He attended the University of Leipzig and specialized in psychology in Wundt's laboratory. He became a privatdocent at Freiburg, 1887, lecturing in philosophy and maintaining a laboratory in experimental psychology. In 1892 he was called to Harvard University as Professor of Psychology for three years. Here he organized a laboratory, lectured extensively, and made trips to various parts of the United States. After two years in Freiburg again Münsterberg returned to Harvard for good in 1897. Here he worked hard and effectively for a new departmental building—realized in Emerson Hall. He drew up the plan for lectures at the World Fair in St. Louis which was eventually adopted, and helped organize the series of lectures. He now entered upon a period of intense activity,—traveling, lecturing, writing and interesting himself in applied psychology. He spent the year 1910-11 in Berlin organizing the Amerika-Institute there. From 1911 on, Münsterberg's principal activity was in applied psychology. Then the war came on and Münsterberg did what he could to diminish the feelings aroused in America against Germany, following the rape of Belgium. He died suddenly, December 16, 1916.

Münsterberg was a man of large physique, who matured early. He was perhaps primarily a verbalist, and at 15 years compiled a lexicon of foreign words used in German, and their etymology. He studied Arabic and Sanskrit. At 19 he studied French and translated various poems from the French into German. At 7 he wrote his first poem and at 14 he was writing ballads and epic poems. He was, for a time, doubtful whether to go into literature or psychology. He had also a keen auditory, especially musical, interest. At 9 years he began lessons on the 'cello; and for years he played on this instrument. His brother Otto's principal avocation was music. Moreover, Hugo had a strong visual sense that led him to visit art collections and to collect art. Possibly it was because he derived so much pleasure from his own senses that he became a student of experimental psychology, especially in the field of the senses. Münsterberg had a strong social instinct which led him to teach and made him a popular teacher and lecturer. No doubt this led him into the field of applied psychology—vocational selection. Finally, Münsterberg had somewhat nomadic traits. At least he liked to travel and gain new visual and social experiences. Consequently he accepted numerous invitations to lecture at distant points. It was natural for him to form a link between Europe and America.

He possessed a buoyant temperament and preserved, into middle life his youthfulness of spirit. "Eternal values" is the best expression of his philosophy.

Margaret Münsterberg. 1922. Hugo Münsterberg; His Life and Work. N. Y., Appleton, $3.50.

THE INDIANA COMMITTEE ON MENTAL DEFECTIVES.

The Indiana Committee on Mental Defectives has been carrying on surveys since 1916. Investigators from the Eugenics Record Office have been active in the work of this committee. The first survey, in 1916, which consisted of finding and listing the epileptic, feeble-minded, and insane in two counties of Indiana, was conducted by three field workers of this office. Two of these were, at that time, attached to State Institutions in Indiana, while the third was on a special assignment, that of the Tribe of Ishmael. The Indiana survey was carried out for the purpose of finding out the number of defectives, the location, environment, the kind and degree of deficiency, the family history, and something of the causes responsible for the abnormal condition. The survey was carried out, in these counties, by visits to physicians, township trustees, boards of children's guardians, social agencies and schools, and, most important, by making contact with the people in their homes. Each person referred, from any source, to the field workers was seen personally by the workers, and thereby all information of a casual nature checked. Mental examinations were given in many cases, often in the homes of the people, many in the schools. After careful study, some cases referred previously by informants were decided as not defective or another classification given. Many defectives were found who had not been referred by anyone. In some areas a house to house canvass was made, the entrée being easily secured because the investigators were interested in school children. All places that looked as if inhabited by the feeble-minded, especially in the very rural districts, were visited. Places where the feeble-minded naturally gather, such as river and creek bottoms and houseboats, and the rugged, unproductive areas, were carefully gone over. In November of that year, 1916, a report on those two counties was published and submitted to the Governor of the state, and a copy sent to each member of the state legislature for 1917. The legislature met and at this time, by resolution, the committee was continued and $10,000 appropriated from state funds for its use.

Since 1917, nine counties have been surveyed and other studies have been made in courts, schools and orphans' homes. Since the preliminary survey of the committee in 1916, the Eugenics Record Office has had no field workers associated directly with the survey, although it has assisted in the planning of the work and in certain special investigations.

The more recent work of the committee has been that of a survey of the cases in the three courts of Indianapolis—the Marion County Juvenile Court, the Marion County Criminal Court and the City Court of Indianapolis, to determine the mental condition of the defendants and make family history studies where possible; also a mental survey of the schools in two cities of the state, where all the children were given group tests. Later individual tests were made of all children of superior or very inferior ability as found by the group tests. The committee has also been gathering family histories of the mentally defective criminals, where it has been known that such criminals were defective previous to the commission of the crime.

(Abstract of paper presented by Arthur H. Estabrook at the meeting of the American Association for the Study of the Feeble-Minded at St. Louis, May 1922. To be published in full in the Proceedings of that Society.)

HUMAN STOCK AT THE KANSAS FREE FAIR.

Dr. Florence Brown Sherbon of the Kansas State University at Lawrence was in charge of "Department S—Eugenics" of the Kansas Free Fair which was held at Topeka from September 11 to 16, 1922. In this work Dr. Sherbon was assisted by Mrs. Mary T. Watts of Audubon, Iowa, who originated the movement for examining children of the pre-school age at the Iowa State Fair in 1911. The Kansas classification of human exhibits is as follows:

DIVISION 366—HUMAN STOCK.

Class
3681 Single Adults; 17 years and above.
3682 Pair; man, wife, no children.
3683 Small Family; man, wife, one child.
3684 Average Family; man, wife, two to four children.
3685 Large Family; man, wife, five or more children.

The following notes of explanation were issued by "Department S" in a circular prepared by the Free Fair:

"OBJECT: To apply the well-known principles of heredity and scientific care which have revolutionized agriculture and stock breeding to the next higher order of creation—the human family.

"METHOD: An examination form has been worked out by a group of experts. This covers inheritance; individual health history; mental, nervous and psychological examination; structural examination including posture, development and strength; general physical examination; special examination of eyes, ears, nose, throat and teeth; laboratory examination of urine and blood.

"CLASSIFICATION OF INDIVIDUALS: (1) Pre-school children, including children up to 6 years of age. (2) School children, including children from 6 years to 17 years. (3) Adults, including those 17 and above.

"CLASSIFICATION OF FAMILIES: Young adults of marriageable age will be given a eugenic examination to determine their fitness to marry. Childless married couples will also be examined. These individuals will receive medals and certificates according to merits. Competing families will be classified as small, average or large, as described below. Individual children will not be examined without the other members of the family.

"ADVICE: No medical advice or treatment will be given and no one obviously ill will be admitted. This is in no sense a clinic. However, each individual will be informed as to his condition and advised as to how to improve his health.

"REGULATIONS: The members of the competing families will be given individual examinations and scored separately. The family score will be made by averaging the individual scores. Examinations will be private and winning scores only will be announced. The examinations will be held in the Eugenics Building from 9 to 12 A.M., and 2 to 5 P.M. daily, Entries will be received up to and including September 13. Entrants must be punctual or lose their turn.

"AWARDS: All entrants will be scored A, B, C or below.

"There is no entry fee for this examination. This service is being offered as a demonstration of its value to the families themselves. The examinations will be made in a series of booths in the Eugenics Building.

"It is the intention to make this an annual affair. . . . Every county in Kansas should send its best families to try for the Trophy."

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October 1922

ACCESSIONS TO ARCHIVES OF THE EUGENICS RECORD OFFICE, SEPTEMBER, 1922.

Biographies, 2.
Collective Biography, 1.
Record of Family Traits, 163.
Individual Analysis Cards, 158.
Family Tree Folders, 6.
Family Distribution of Personal Traits, 1.

THE TRAINING CORPS OF 1922.

At present (October 15, 1922) the members of the 1922 Field Investigators Training Corps of the Eugenics Record Office are located as follows:

1. Katherine Belzer, Scientific Assistant to Dr. Charles B. Davenport, Department of Genetics, Carnegie Institution of Washington, Cold Spring Harbor, Long Island, N. Y.

2. Lydia E. Bucknell, Eugenical Field Worker, Harrisburg State Hospital, Harrisburg, Pa., Dr. E. M. Green, Superintendent.

3. Dr. Pauline H. Dederer, Professor of Zoölogy, Connecticut College, New London, Conn.

4. Edith Grubb, Eugenical Field Worker, Kings Park State Hospital, Kings Park, N. Y., Dr. William C. Garvin, Superintendent.

5. Ivah M. Jones, student of abnormal psychology, St. Lawrence University, Canton, N. Y.

6. Ola Bella Lee, Eugenical Field Worker, State Hospital, Warren, Pa., Dr. H. W. Mitchell, Superintendent.

7. Marguerite Loucks.

8. Joseph H. Miller, Attendance Officer, New York City Board of Education.

9. Ethel Peters, Parole Officer, Connecticut State Farm for Women, Niantic, Conn.

10. Esther H. Powell.

11. Pearl Rainey, teacher in High School at Mt. Vernon, Ill.

12. Dr. Frank L. Rainey, Professor of Biology, Centre College, Danville, Ky.

13. Douglas Sprunt, post-graduate study in anthropology.

14. Geraldine Stowell, Eugenical Field Worker, Institution for Feeble-Minded, Columbus, Ohio., Dr. E. J. Emerick, Superintendent.

15. Mrs. Frances Tanner, Social Service Worker, Brooklyn State Hospital, Brooklyn, N. Y., Dr. I. G. Harris, Superintendent

16. C. Emily Todd, student of abnormal psychology, St. Lawrence University, Canton, N. Y.

17. Ada F. Wells, Eugenical Field Worker, State Institution for the Feebleminded, Pennhurst, Pa., Dr. William J. Steward, Chief Physician.

18. Dr. Alice W. Wilcox, Professor of Biology, Brenau College, Gainesville, Ga.

PERSONAL NOTES.

Dr. C. H. Danforth, '13, has resigned from the School of Medicine, Washington University, St. Louis, Mo., and has accepted a position in the Department of Anatomy, Stanford University, Stanford, California.

Professor Thomas R. Garth has resigned from the University of Texas and has taken up his new work as head of the Department of Education

of the University of Denver. In this new position Dr. Garth expects to continue, with increased opportunities, his investigations into racial differences, with special reference to specific mental abilities.

President Henry Fairfield Osborn, of the American Museum of Natural History, recently sailed from Seattle to the Orient for the purpose of making several scientific investigations. From the eugenical point of view, the most interesting of these will probably be his contemplated visit to the fossil-bearing formations in the Siwalik Hills of India, where Mr. Barnum Brown, of the Museum, has preceded him on a collecting expedition. The Tertiary strata of these hills have long been pointed toward as possibly holding fossil remains of the earliest primates.

Dr. F. Stuart Chapin has resigned his professorship at Smith College and has accepted an appointment as Professor of Sociology, Chairman of the Department and Director of the Training Course for Social and Civic Work at the University of Minnesota. Dr. Chapin has been Professor of Economics and Sociology at Smith College for ten years. He organized, and was the first director of, The Smith College Training School for Social Work. His recent book, "Field Work and Social Research," was preceded by two volumes on social evolution.

Director Charles B. Davenport, of the Station for Experimental Evolution and the Eugenics Record Office of the Carnegie Institution of Washington, left New York September 13, on the "Paris," for Europe. He will proceed directly to Brünn, Czechoslovakia, for the purpose of participating in the International Gregor Mendel Centenary on September 22, 1922. From Brünn he will go to Vienna to attend the meeting of the German Society of Geneticists, September 25–28. His next visit will be to Upsala, where he will confer with Dr. Herman B. Lundborg, of the University of Sweden. From Sweden he will proceed to Norway for the purpose of paying a visit to Dr. Jon Alfred Mjøen, of the Winderen Laboratorium, Christiania, thence to Holland to visit Dr. Joh. Von Der Speck, Doldersche Weg. 60, Den Dolder. He will go to Belgium for the purpose of attending, as delegate of the Carnegie Institution of Washington and the Eugenics Research Association, the meetings of the International Commission of Eugenics. These will be held during the week of October 9–14. The next visit will be to Paris in the interests of the Third International Congress of Eugenics. In London, on October 24, he will lecture before the Eugenics Education Society on "Recent Work of the Eugenics Record Office." He will sail from England about October 25.

THE SIXTH LATIN-AMERICAN MEDICAL CONGRESS.

An international exposition of Hygiene will be held November 19 to 26 at Havana in connection with the VI Latin-American Medical Congress. The first section of the exposition includes chiefly the hygiene of the species, eugenics and homiculture. Among the addresses announced is one by Dr. Domingo S. Ramos on "Herencia y Eugenesia"; also one by Dr. Aristides Mestre on "Brujeria y criminalidad en Cuba." Dr. Ramos writes: "At the annual expositions we shall celebrate premiums on 'Eugenical Fertility.'"

The Eugenics Record Office has sent an exhibit of demographic charts, maps, photographs, family history records, and scientific papers.

THE SECOND INTERNATIONAL SOCIOLOGICAL CONGRESS.

This congress was held in Vienna, Austria, October 1 to 8, 1922. Reports and abstracts will be published in a special number of *Vox Populorum*, the official organ of the International Sociological Congresses, and the *Bulletin* of the International Sociological Institute, Turin.

The subjects considered were:

A. Purely Sociological Problems.

1. The Causes of Revolutions and their Social Prevention.
2. The Principle of Relativity in the Social Sciences.
3. Sociology and Statistics.

B. Problems of Applied Sociology.

Section I. International Rights.

1. The "magna charta" of the Rights and Duties of Peoples.
2. The Juridical Regulation of National Minorities.
3. The International Intellectual Coöperation.

Section II. Economic Problems.

1. The Remedies for the Exchange Crisis.
2. Scientific Organization of International Commerce.
3. The Economic and Financial Reconstruction of Austria.

Section III. Disarmament.

Section IV. Labor Problems.

Section V. Problems of Feminism.

Section VI. Problems of Biology and Social Medicine.

The preliminary organization was in charge of Prof. Francesco Cosentini, Director of the Instituto Internationale di Socologia, 21, Via Santorre Santarosa, Torino.

INTERNATIONAL HORTICULTURAL CONGRESS.

An international horticultural Congress will be held at Amsterdam, September, 1923, under the auspices of the Netherlands Horticultural and Botanical Society. Papers will be welcomed on subjects of a strictly scientific nature and those relating to practical cultivation. Excursions will be arranged to some of the most important parts of horticultural Holland. Papers already promised are Professor Erich Tschermak of Vienna on "Hybrids of Primula," Ernst H. Kralage, "History of the Dahlia," A. H. Blauw, "Bud development in bulbs, fruit trees and flowering shrubs."

TRAINING CORPS CLINICS—1922.

The 1922 Training Corps for Eugenical Field Investigators were given clinics and made practical field studies as follows:

1. Friday, July 7. Clinic on primary classification of the insane by Dr. William C. Garvin, Superintendent, Kings Park State Hospital, Kings Park, N. Y.

2. Tuesday, July 11. In collaboration with Dr. C. L. Markham, Superintendent of the Brunswick Home, the Corps went to Amityville and spent the day in making mental tests and anthropometric measurements of defective children.

3. Friday, July 14, was spent in New York City in three studies: First, the visit to the old Australian Convict Ship at Pier 1, North River. This was studied from the standpoint of the student of the eugenical aspects of criminal deportation. Second, the afternoon was spent at the Ellis Island Immigrant Station, where Chief Medical Officer W. C. Billings detailed a physician to explain the medical examination and hospitaliza-

tion conducted by the Public Health Service, and also where Honorable R. E. Tod, Commissioner of Immigration for the Port of New York, received the Corps, explained the working of the immigration office, and detailed an officer to show the nature of the immigration service. Professor Irving Fisher of Yale University accompanied the group on its Ellis Island study. Third, the evening was spent in studying, from the standpoint of endocrinology, the freaks found in the side shows of Coney Island.

4. Thursday, July 20, two clinics in New York City. First, at the Hospital for the Ruptured and Crippled, 321 East 42d Street, the Superintendent, Dr. Joseph D. Flick, kindly detailed Dr. William Coley and Dr. Ralph Kahle to explain the hereditary features found in certain cases of deformity which were receiving surgical treatment at the hospital at the time of the clinic. On the afternoon of the same day, Dr. W. B. Weidler, at his office at 137 East 60th Street, had assembled, from "The Lighthouse," a number of interesting cases of hereditary and congenital eye defects. After a lecture on the general subject of blindness, Dr. Weidler demonstrated the several individual types.

5. Tuesday, July 25, two institutions were visited: First, Letchworth Village at Thiells, N. Y. Dr. Charles S. Little, Superintendent, and Dr. H. W. Potter gave clinics, first, on the general types of feeblemindedness, and second, on the factor of endocrine secretions in the etiology of mental deficiency. Late in the afternoon of the same day, Dr. J. J. Nutt, Superintendent of the State Hospital for Crippled Children at West Haverstraw, detailed Dr. Eduardo Hurtado to demonstrate the cases then in the hospital, with special reference to heredity.

6. Friday, July 28, was spent in three clinical visits in New York City. First, at the Psychiatric Institute at Ward's Island, Dr. Clarence O. Cheney gave the clinic on endocrine disorders in relation to insanity. Second, early in the afternoon, Dr. Charles G. McGaffin of the staff of the New York City Children's Hospital, Randall's Island, gave a clinic on general types of feeblemindedness, and later, Dr. Louise E. Poull, in charge of the Psychological Laboratory of the same institution, explained the apparatus and tests being developed in collaboration between the hospital and the Psychological Department of Columbia University. Third, still later, Col. E. C. Barber, Superintendent of the House of Refuge on Randall's Island, invited the Corps to witness a special graduating day entertainment which the boys of his institution had prepared to celebrate the termination of the school year.

7. Monday, July 31, Dr. George W. Mills, of the staff of the Central Islip State Hospital, gave a clinic on the mental mechanism, amply illustrating the specific mechanisms with cases selected from the hospital.

8. On Thursday, August 3, the Corps returned to Kings Park Hospital, where each student was given a patient as the central figure for a case history and pedigree study. From the hospital records and examination of the patient, the preliminary case records were secured. On the next and following days, the members of the Corps went to the homes of the patients on various parts of Long Island and secured additional case and family history records. On the completion of this field study, these records were prepared and analyzed in practical eugenical fashion.

REPORTS AND PUBLICATIONS OF THE FIRST AND SECOND INTERNATIONAL CONGRESSES OF EUGENICS.

The First International Congress of Eugenics was held in London in 1912. The papers presented before this Congress are reported in two volumes entitled "Problems in Eugenics." There is also a supplementary pamphlet called the "Catalog of Exhibits." American purchasers can secure these reports directly from the Secretary-Treasurer of the Eugenics Research Association, Cold Spring Harbor, Long Island, N. Y. Volume I, $2.25. Volume II, 80 cents. Catalog of Exhibits, 35 cents. Postage extra.

The papers and reports of the Second International Congress of Eugenics, New York, 1921, are now being printed. Volume I will be entitled "Eugenics, Genetics and The Family"; Volume II, "Eugenics in Race and State." Members of the Congress will be given one volume, either the first or second according to the individual choice, free. By pre-publication order, members may secure the second volume for $4.00. To non-members the sale prices are as follows: Pre-publication—both volumes, $9.00; single volumes, $5.00. After publication—both volumes, $11.00; single volumes, $6.00. All prices are net, postpaid. Besides these two volumes of scientific papers, there will be issued a supplementary pamphlet which will contain an account of the Congress, together with a Catalog of the Exhibits. This will be sent free to each member of the Congress.

Also, plans are in preparation for rebinding, under one cover, all accounts, descriptions and illustrations of the exhibits. The price of this publication has not yet been determined.

Orders for all publications of the Second Congress may be placed directly with Williams & Wilkins Company, Mount Royal and Guilford Avenues, Baltimore, Md.

THE CONGENITAL FACTOR IN CHRONIC RENAL DISEASE.

Dr. Edward Weiss, Associate in Pathology at Jefferson Medical College, Philadelphia, in a paper read before the Section on Pathology and Physiology at the Seventy-Third Annual Session of the American Medical Association, St. Louis, May, 1922, reported "clinical notes and pathologic findings in three uncommon cases of chronic renal disease occurring in comparatively young persons, associated with a marked degree of nitrogen retention and running a rapidly fatal course." He concluded that "the subjects may therefore be regarded as individuals congenitally predisposed to the development of a renal lesion, probably because of a 'weak link' (hypogenetic kidneys) in the cardiovascular-renal chain, with a determining factor in the form of an infection or strain resulting in the rapid onset of a fatal uremia." (*Jr. A. M. A.*, pp. 1097–9, Sept. 30, '22.)

THE CHROMOSOMES OF A MONKEY.

Dr. Theophilus S. Painter, of the University of Texas, in *Science* for September 8, 1922, reports that the "ring-tail" monkey (exact species not yet determined) shows essentially the same conditions as were found in the opossum and in man in reference to the X–Y type of sex-chromosomes. "In dividing spermatogonia, one counts 54 chromosomes. It is to be noted that the smallest element has no mate of like size and shape. It is the 'male determining,' or 'Y' chromosome. . . . In the second maturation division the sex-chromosome (either X or Y) divides equationally. 27 chromosomes have been counted in the late telophase of the second maturation division."

EUGENICAL NEWS

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INTERNATIONAL EUGENICS NUMBER

INTERNATIONAL COMMISSION OF EUGENICS.

The International Commission of Eugenics met at the rooms, Maison des Médecins, Bruxelles, of the Société Belge d'Eugénique, on Saturday, October 7, and Monday, October 9. There were present Major Leonard Darwin, Chairman; Dr. Albert Govaerts, Secretary; Dr. Van Herwerden of Utrecht, Holland; Dr. Wimmer, Professor of Psychiatry, Copenhagen; Dr. Jon Alfred Mjøen of the Winderen Laboratorium, near Christiania; M. Lucien March of "Statistique générale de la France," and Dr. Pinard, President Soc. Française d'Eugénique, Paris; and Dr. C. B. Davenport of Cold Spring Harbor.

It was voted unanimously to invite German delegates to the Commission. It was decided provisionally to hold the next meeting of the Commission at Lund, Sweden, and the next meeting of the Eugenics Congress in 1924 at Prague. These decisions are contingent upon the possibility of making appropriate arrangements for the meetings.

The occasion of the meeting of the International Commission of Eugenics at Bruxelles was taken advantage of for a meeting of the Ligue nationale Belge contre le Péril vénérien at the same place, and an extensive social program was arranged.

On October 7th, at 10:30, a lecture was given by Dr. Apert, physician of the hospitals of Paris, at the Palais des Académies, entitled, "L'Hérédité Morbide." At 5 o'clock was given a tea in honor of the Commission. On Sunday, October 8th, in the morning a joint congress of the Ligue contre le Péril vénérien and Fédérations of Anti-Alcoholic Societies of Belgium was held in collaboration with the Belgian Eugenics Society. In the afternoon there was an excursion to Waterloo and a reception by the communal administration of Waterloo where an address was given by M. Gheude, député permanent, entitled, "Les buts Eugéniques de la Ferme-École." This was followed by visits to the battle field and to the Ferme-école Provinciale, the new home for the feeble-minded which it is hoped will be ready for occupancy in the spring. On Monday, there was held the second meeting of the Commission and, at 4 o'clock, a visit to the Solvay Institute of Sociology where Major Darwin gave an address entitled "L'Eugénique" and Professor Wimmer of Copenhagen one on "Mental Heredity." At 5 o'clock, the Prison de Forêst and its laboratory of anthropology were visited. On Tuesday, addresses were given by Dr. Daisy M. Robinson, by M. Lucien March of Paris, and Dr. Berthollet of Lausanne on matters partly of anti-venereal and partly of eugenical interest. At half past two in the afternoon, a meeting was held in the large hall of the Solvay Institute of Sociology, at which was inaugurated the eugenics room of the Institute. Two lectures were given on the practical organization of eugenics, "in the United States" by Dr. Davenport; "in Belgium" by Dr. Govaerts. On Wednesday a visit was made by the Congress to the City of Antwerp.

MOTHER TONGUE OF FOREIGN WHITE STOCK IN NEW YORK CITY.

By "foreign white stock" is meant the total foreign-born white population plus the native white population having one or both parents foreign born. The term "mother tongue" refers to the language of customary speech in the homes of the immigrants before coming to this country. The Bureau of the Census reports, in order of their numerical importance, that the leading mother tongues represented in the foreign white stock in New York City in 1920 were as follows: Yiddish and Hebrew, 946,139; English and Celtic, 897,452; Italian, 803,048; German, 690,789; Russian, 221,163; Polish, 161,310. These six mother tongues represented 3,719,891, or 86.6 per cent. of the 4,294,629 persons constituting the foreign white stock of New York City as enumerated in 1920. During the decade 1910–1920, Yiddish and Hebrew declined from 22.9 per cent. to 22 per cent.; English and Celtic from 25.7 per cent. to 20.9 per cent.; German from 21.9 per cent. to 16.1 per cent. Nearly all other stocks showed great increases, such as the Italian from 14.6 per cent. to 18.7 per cent.; Slavic and Lettic from 5.6 per cent. to 11.3 per cent.

CENTER OF FOREIGN-BORN WHITE POPULATION: 1920.

The Bureau of the Census announces that, for the census of 1920, the center of foreign-born white population of the United States is in the eastern part of Allen County, Indiana, about 10¾ miles east of New Haven and 16 miles east of Fort Wayne. For the first time in three decades the center of foreign-born white population showed a western movement.

The change in direction of the movement of this center from east to west is due principally to the increase in foreign-born white population in the state of California. The total increase in the foreign-born white population of the United States was 367,209 and the increase in the states of Texas, California, and Arizona was 316,222, or 86 per cent. of the total increase. Twenty states showed an increase in this element of their population from 1910 to 1920; ten of them were states east of the center and seven were states west of the center. The western states, however, had much greater increases in their foreign-born white population than the states east; the largest increases were in California, Michigan, and Texas.

CENTER OF NEGRO POPULATION: 1920.

The center of negro population, according to the determination of the Bureau of the Census, is now about 1.75 miles north-northeast of Rising Fawn town, Dade Co., Georgia. During the last decade it has moved approximately 9.4 miles east and 19.4 miles north. This is the first time in history that this center has moved northeast. The total increase in negro population for the decade, 1910–1920, is 635,368, fifty-six per cent. of which was due to the increase of negroes in the Northern States. The Bureau of the Census accounts for this northward movement of negro population as being due to the cutting off of immigrant labor during the World War, and the consequent demand for unskilled labor at high wages in the North. Since the war there has probably been a considerable return of the negro population to the South, due to the depression in certain industries in the North and the partial resumption of European immigration.

PERSONAL NOTES.

Dr. and Mrs. Halsey J. Bagg announce the birth of a daughter, Margaret Alice, on October 3, 1922, at Croton Lake, N. Y. Mrs. Bagg was formerly Dorothy Osborn, '16.

Dr. J. A. Detlefesen, on leave of absence from the University of Illinois, will, according to *Science*, spend the winter at the Wistar Institute of Anatomy and Biology, Philadelphia.

Mr. and Mrs. Scoville E. Hollister announce the birth of a daughter, Joanne Hollister, on September 8, 1922, at Los Angeles, California. Mrs. Hollister was formerly Mildred S. Covert, '17.

Dr. Henry H. Goddard has resigned his position as Director of the Bureau of Juvenile Research at Columbus, Ohio, and has accepted a position as Professor of Abnormal Psychology in Ohio State University.

Announcement has been made of the marriage of Miss Elizabeth H. Perry, '16, to Mr. John Raymond Herman. Mrs. Herman is taking graduate work in genetics at the University of California. Mr. and Mrs. Herman's address is 2525 Regent Street, Berkeley, California.

William L. Dealey, '13, is a member of the statistical section of the U. S. Public Health Service. His work concerns especially the control of the so-called "racial poisons." At present he is gathering data in reference to boys 12 to 18 years of age. His address is 1341 Taylor Street, N. W., Washington, D. C.

Professor E. G. Conklin of Princeton is giving a course of eight lectures on "The Revolt against Darwinism" at the Lowell Institute, Boston, during November and December. Professor W. J. V. Osterhout of Harvard is giving six lectures on "The Nature of Life and Death," before the same Institute in January.

Dr. Maximilian P. E. Groszmann, member of the Eugenics Research Association, died October 2d, aged 67. Dr. Groszmann was born in Brieg, Prussia, and came to this country in 1876. He was the founder of the National Society for the Study and Education of Exceptional Children, and in 1904 established the Groszmann School in North Plainfield, N. J.

Dr. Arthur H. Estabrook, '10, has completed his investigations of the Ishmael Tribe of Indiana, and has moved to Philadelphia, which will be his headquarters during his future eugenical study of special groups of the American population. His next investigation will consist in a study of the Mountain Whites of the South, principally in the States of Tennessee and North Carolina. Dr. Estabrook's new address is 3615 Hamilton Street, Philadelphia, Pa.

STATUS OF IMMIGRATION.

According to the bulletin issued by the Bureau of Immigration on September 30, 1922, during the three months which have lapsed since the beginning of the immigration year on July 1, there have been admitted a total of 105,080 immigrants from a total annual quota of 357,803—thus leaving for the balance of the year 249,700 legally admissible immigrants. In one fourth of the year Czechoslovakia has consumed *approximately* one half her annual quota, Denmark a fifth, France one third, Germany an eighth, Greece one half, Hungary one half, Italy one half, Netherlands a fourth, Norway a sixth, Poland a third, Portugal three fifths, Roumania one half, Russia one fourth, Spain three fourths, Sweden a fifth, Switzerland one third, United Kingdom a fifth, Turkey one half.

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ACCESSIONS TO ARCHIVES OF THE EUGENICS RECORD OFFICE, OCTOBER, 1922.

Biography, 3.
Collective Biography, 2.
Town History, 1.
Record of Family Traits, 3.
Individual Analysis Cards, 9.
Twin Schedules, 13.
Special Traits, 5.
Field Workers' Reports:
A. H. Estabrook: Description, 540; charts, 3.
Whittier School: Description, 309; charts, 20.

FOREIGN NOTES.

During 1922–23 the Swedish Institute for Race-Biology is giving a series of lectures at the University. These are awakening great interest.

A Gesellschaft für Volksgesundheit of Helsingfors is undertaking to secure funds for eugenics work in Finland. It is understood that Professor Harry Federley of that city will direct the eugenical work.

A bill providing for sterilization as a eugenical measure has been introduced into the Swedish Reichstag. A committee has been appointed to consider the matter.

Professor Rafaele Issel has, according to *Science*, been appointed director of the biological work of the Italian government on the Adriatic. This work will be concentrated at Rivigno.

NATIONAL OFFICE OF EUGENICS IN BELGIUM.

On Tuesday, October 10, there was inaugurated at Bruxelles a Belgian National Office of Eugenics. This occupies one of the small rooms, or cellules, of the Solvay Institute of Sociology, situated in the charming Parc Léopold of that city. The director of the new Eugenics Office is Dr. A. Govaerts, who is assisted by Mr. W. Schraenen, an anthropological assistant of Dr. L. Vervaeck, physician of the prison. It is understood that the Institute Solvay has made an appropriation of 10,000 fr. and that Mr. Armand Solvay will make a personal gift of 7,000 fr. Among those who have been instrumental in the establishment of the Office may be mentioned, first of all. Dr. M. F. Boulenger, director of the School of the Feeble-Minded at Waterloo and president of the Société Belge d'Eugénique; M. Berryer, Minister of the Interior and of Hygiene; the Surgeon General of the Belgian Army, Willemaerts; Col. Noterman, head of the Army Institute of Physical Military Training; H. Velghe, director general of hygiene in the Department of the Interior; M. Dom, director general of justice; M. Vandervelde, Minister of State; M. Wittemans, senator; M. Gheude, senator of the Province of Brabant; Dr. Bayet, member of the Royal Academy of Medicine; M. Brunet, president of the House of Representatives; Professor Demoor, delegate of the Academy of Medicine; M. Hostelet, director of the Solvay Institute of Sociology. Others who participated in social affairs connected with the Congress were Dr. and Mrs. Leclerc-Dandoy, of the University; Professor Ley; Dr. Péchère, Dr. R. Sand and the Rev. Père Fallon. From the foregoing list it will be observed that

the Belgian Society of Eugenics and the Belgian Office of Eugenics which has grown out of the Society have the highest social standing in Bruxelles. At the meeting of the International Commission in Antwerp the Mayor of the City announced that an appropriation had been made for a branch office of the National Office of Eugenics, to be located at Antwerp.

EUGENICS IN CZECHOSLOVAKIA.

The Czechoslovak Eugenic Society in Prague has been carrying out a series of meetings and lectures in honor of the one hundredth birthday of Gregor Mendel. On Thursday, October 19th, a general meeting was held, opened by Dr. L. Haškovec, professor in the University and president of the Czechoslovak Eugenic Society. A lecture on "Mendel's Work in Natural Science" was delivered by Dr. B. Němec, rector of the King Charles University, Prague. Dr. V. Rüzéčka, professor in the University, lectured on "Mendelism and Causal Research in Genetics." During October and November lectures have been given as follows: "Mendelism in Theory and Practical Life" by Dr. Arthur Brožek; "The Inheritance of Acquired Characters and the Importance of Mendelism for Evolution" by Dr. Jaroslav Křiženecký; "The Methods of Mendelism" by Dr. Erwin Baur; "Mendelism and the Inheritance of Mental Qualities" by Dr. Charles Herfort; "The Importance of Mendelism in Medicine and Eugenics" by Dr. L. Haškovec; "Eugenics and its Relation to Social and Ethical Problems" by Dr. Břetislar Foustka, professor at the University, Prague.

The Society proposes to print the lectures in the form of a memorial volume to Mendel. It invites contributions to this volume by geneticists of other countries. All contributions are to be received before March 15, 1923, by "The Institute of Genetic Biology and Experimental Morphology," Charles University, Prague.

RACE-BIOLOGY IN SWEDEN.

The Swedish Parliament voted, May 13, 1921, to establish a Swedish Institute for Race-Biology with 82,500 crowns (Swedish) in addition to the salary of the director. Of this sum, 24,000 crowns are to be utilized for the first equipment of the Institute, 26,500 for working expenses, and the remainder for salaries for assistants during 1922. Work began January 1, 1922. The Institute has its own council, appointed by the King and standing directly under the Government. At present it is located at Upsala and the director is nominally on the University staff; but the Institute is a governmental rather than University department or agency.

The first council comprises: H. Hammarskjöld, Lord Lieutenant of Upland; A. af Jocknick, Esq., Director General in the Royal Committee for Pensions, Stockholm; F. Lennmalm, M.D., Rector of the "Karolinska Instutet," Stockholm; Mrs. Emilia Broomé, Stockholm; J. V. Hultkrantz, M.D., Professor of Anatomy, Upsala University; H. Nilsson-Ehle, M.D. and Ph.D., Professor of Heredity in Lund University (at Åkarp); H. Lundborg, M.D., Director of the Institute. The present staff includes: Dr. F. J. Linders, statistician, archivist and vice director; G. Dahlberg, M.D., medical assistant, at present doing anthropometric work; Dr. W. W. Krauss (formerly of Vienna), assistant anthropologist; E. Heckscher, genealogist; Mrs. G. Dahlberg, who helps her husband in anthropometric work, recorded as social worker; and Mr. E. A. Ohlsén, photographer.

HEREDITY IN THE SERVICES.

According to *The Lancet* (1922, ii, p. 211), Mr. S. S. Bramwell has made a study of heredity in the army and found that of 1,010 boys entering the army from Cheltenham between the years 1880–1906, "114 became sappers, 228 became gunners, 158 became Indian officers, 285 got commissions in the British army through Sandhurst, and 225 got commissions through the militia. The Indian officer class is in many respects anomalous, but the other four classes are presumably meant by the authorities to be graded according to their intelligence," the most intelligent being placed first. Mr. Bramwell found the following percentages of "distinguished" fathers: "For sappers, 39 per cent.; for gunners, 28 per cent.; for Indian officers, 32 per cent.; for Sandhurst officers, 19 per cent.; for militia officers, 14 per cent." He "also found that the ability of the brothers taken in bulk is correlated to the classes under consideration." This indicates that ability is largely a matter of inheritance.

Mr. Bramwell also considered "Who make the best soldiers, the sons of soldiers or the sons of civilians?" He finds that: "On the whole, the soldiers' sons did rather better in examinations. The figure for the average boy was 2.86. For the sons of civilians it was 2.56. Differentiating still further, the sons of naval officers did best. Their average figure was 3.66, that for gunners' sons was 3.44, sappers' sons, curiously enough, averaged rather lower at 3.31, while other officers' sons only averaged 2.61. Among civilians, the best average was for sons of Indian Civil servants, 3.62, then came civil engineers, 3.46. Considerably lower came doctors, barristers, solicitors, parsons, and lastly those where the father is not mentioned as following any pursuit. If we regard the other side, the performance of manhood, and exclude the Indian army, we again find that the sons of the services do slightly better.

"The average figure for 'mentions,' etc., is in their case 2.3, in that of the sons of civilians it is 2.17. The sons of naval officers again did best with a figure of 3.42, then came the sons of sappers with a figure of 3.28. Amongst civilians the sons of doctors did best with a figure of 2.77. We may take it, then, that the sons of members of the services make rather better soldiers than the sons of civilian professional men, but if one cannot be both, it is more advantageous to be a member of an able family than of a fighting family."

HEREDITARY PLACES OF LEAST RESISTANCE IN TUBERCULOSIS.

Dr. W. Edel of Marburg (Beiträge z. Klin. der Tuberkulose, Vol. L, 1922) has considered the hypotheses that the site of a primary tuberculosis lesion in the lungs is often identical in members of the same family (Turban, 1900) and that tuberculosis is liable to break out at the same age in different members of one and the same family (Brehmer). He has tested these hypotheses in a study of 104 families in which two or more persons were tuberculous. According to *The Lancet* (June 24, 1922) he found that in 70 families—i.e., in 67 per cent.—the different members of the same family developed the primary lesion in the same site. In 24 families the tuberculous members developed the disease at one and the same age, and in 16 of these 24 families there was also evidence of locus minoris resistentiæ. *The Lancet* raises the question how it is possible to determine the site of the primary lesion in these cases.

FACIAL HAIR BY RACE, SEX AND AGE.

Mildred Trotter, Research Assistant in Anatomy of the Washington University School of Medicine, under the direction of Dr. C. H. Danforth, '13, has published (Washington University Studies, Vol. IX, Scientific Series, No. 2, pp. 273–289, 1922) the results of her study of facial hair in the white and negro races. She concludes that

"1. No sexual differences and no racial differences in the actual numbers of facial hairs have been found.

"2. The facial hairiness of man does not lend itself to the classification proposed by Friedenthal.

"3. There is no sexual difference in length or in diameter of facial hairs until after the tenth year.

"4. After the tenth year the length of the facial hairs in the male greatly exceeds the length of the facial hairs in the female.

"5. The facial hairs of women of the white race slightly exceed those of the colored race in length.

"6. After the tenth year the diameter of the facial hair in the male greatly exceeds the diameter of the hair in the female, but the smaller hairs in comparable regions of the face in the two sexes are similar throughout life.

"7. The hairs of the white race show a greater average thickness than the hairs of the colored race.

"8. In both sexes of both races the upper lip is the region showing the most constant tendency for vigorous growth of hair.

"9. There is no constant difference in length or in diameter of hairs of dark-haired women and light-haired women, but dark-haired women often seem to have a heavier growth of facial hair, chiefly because of deeper pigmentation."

BIRTH CONTROL AND STERILIZATION.

At the "Birth Control Conference," an international gathering held in London, July 11 to 15, and organized by "The New Generation League for Human Welfare through Birth Control," formerly the "Malthusian League," Professor E. W. McBride "brought the good wishes of the President (Major Leonard Darwin) and the majority of the Council of the Eugenics Education Society, . . ." In an address on birth control and biologic law Professor McBride said that sterilization was the only remedy for the state of affairs in which a residuum of people, utterly careless of the welfare of the state, breed regardless of consequences and then look to the state to support their children. He argued that if the practice of voluntary birth control became more general, an enlightened public opinion would then be formed which would support measures of compulsory sterilization against those who persisted in having families at public expense.

HEREDITY IN DIPHTHERIA.

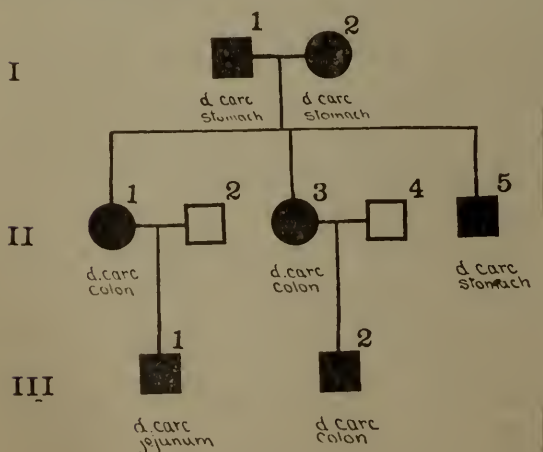
Heredity plays a part in susceptibility to diphtheria. Such susceptibility can be determined by the Schick test; and has been so determined by Zingler (*Jour. Amer. Med. Assn.*, June 24, p. 1945) in 52,000 school children. He often found that a group of children belonging to one family gave entirely different Schick reactions from a group belonging to another family living under the same conditions. Some entire families were characterized by an exceptionally early incidence of susceptibility or of immunity. Italian children showed little susceptibility; colored children showed much.

SWISS EUGENICS ENDOWMENT.

The late Julius Klaus, of Switzerland, at his death left about 1,000,000 francs, to become available after the death of his widow, for race-hygiene investigations in that country. It is expected that Professors Otto Schlaginhaufen, Professor of Anthropology, and Alfred Ernst, Professor of Botany, of Zürich, will direct this fund when it becomes available.

A FAMILY HISTORY OF INTESTINAL CARCINOMA.

Dr. F. L. Reichert of the Johns Hopkins Hospital reports a family history of J. A. W., case No. 156,045, as follows: This man died June 1, 1922, of carcinoma of the jejunum. His mother died of carcinoma of the colon. A sister of the mother died of carcinoma of the colon, and a son of this woman (the patient's mother's sister's son) died of carcinoma of the colon. The mother's brother died of carcinoma of the stomach. The patient's mother's father and mother (the parents or grandparents of all persons thus far mentioned) died of carcinoma of the stomach. Thus two grandparents, the three children of the parental generation and two grandchildren died from carcinoma of the digestive tract.



INTESTINAL CARCINOMA.

FAMILIAL DISEASES.

E. Leredde, in *Presse Médicale*, July 19, 1922, concludes that "heredity creates a familial inferiority of this or that organ, . . . there is no organ and no system in which familial affections may not be observed, but heredity does not create diseases, although it may be responsible for anomalies, malformations, morphologic, physiologic and physiochemical defects." (*Jour. Am. Med. Asso.*, Sept. 30, 1922.)

ARAB-NEGRO TRIBES.

Mr. E. R. Grieveson, of Johannesburg, writes us as follows concerning his observations on race mixture in Africa:

"I have noticed that Arab traits in Balŭba natives (a cannibal Congo tribe) are sex limited—the females showing the Arab qualities and the males being repulsive-looking natives. Among Nyassa boys the converse is the case and the intelligence of some of them is remarkable. Further than that I find among the Pondos (a South African tribe) Arabian traits—the heavy curled, bearded Assyrian type (like Assyrian kings of old) and a light Syrian type."

SIKI AND DEMPSEY.

Anthropometrists report that Siki, the Senegalese negro, who, because of his defeat of Georges Carpentier, French champion, now claims to be the champion boxer of the Old World, compares in body measurements with Jack Dempsey, the New World champion, as follows:

	Siki	*Dempsey*
Neck, in inches	15¾	17
Chest, in inches	39¼	39
Waist, in inches	28½	29
Thighs, in inches	24½	23
Calves, in inches	15	18
Biceps, in inches	15½	15
Weight, in lbs.	172½	189
Reach, in inches	75	78

EUGENICAL NEWS

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CRIME AND HEREDITY.

A STATEMENT BY HONORABLE HARRY OLSON, CHIEF JUSTICE OF THE MUNICIPAL COURT OF CHICAGO.

If society can prevent degenerate stocks from multiplying, it is its supreme duty to do so, and when such prevention can be brought about in a humane manner, there will be no hesitancy on the part of an informed public in enacting and enforcing legislation to that end.

The efforts of all who appreciate the necessity of such biological legislation must be directed toward spreading information of the hereditary character of serious nervous and mental disorders, and of some physical defects. That such education is badly needed is evident from the fact that a speaker, in an address before no less important a body than the American Bar Association a few years ago, challenged the idea that there was any possibility of inheriting anything from one's ancestors:

"Heredity," said he, "aside from living parental example has nothing to do with the matter. . . . Usually, the criminal is from an honest father and mother."

The right and the duty of self-defense applies no less to nations than to individuals. The menace of the world war through the elimination of dominant stocks of all nations engaged therein was a tremendous setback to the progress of these nations, but, even so, it was not so serious a handicap to their future welfare as is the fact that degenerate stocks were spared the destruction of war to people the future with their own kind.

Not only must nations defend their future against racial degeneracy from within, but they must limit immigration of defective stocks from all other lands. Because we have received an abundance of valuable and well-bred stock through immigration, our government has been lax and careless in its immigration legislation and administration, while the authorities of other nations, better informed, have made of us an asylum and a dumping ground for their own vagabond, drunken, degenerate, feeble-minded, dementia præcox, epileptic, and criminalistic classes. That this is so has been demonstrated again and again in the Psychopathic Laboratory of the Municipal Court of Chicago, where whole families drift soon after arrival in America and Chicago. The government immigration authorities have been on the lookout for physical defects, eye defects, etc., but have not understood intellectual and emotional defects, especially the latter. The feeble-mindedness or low mentality of certain immigrants has been concealed from the authorities by the mask of a foreign tongue, and the emotional defect by the smoke screen of actual or apparent intelligence.

Our laboratory has demonstrated that where the emotions are absent, there is no conscience, and such a defect governs behavior far more than the intellect. Hence the dementia præcox type of deficiency when accompanied by a twelve-year-old intelligence has had easy admission into America without understanding or objection from our authorities. Early defective immigration has added to our native element of this type. Our criminal courts are full of dementia

præcox cases. They commit most of the fundamental crimes, such as robbery, burglary, rape and murder. They constitute sixty-five per cent. of the inmates of insane asylums. Their care entails a vast expense to the state, in some states thirty-three per cent. of the total assessed taxes. Our asylums and penitentiaries are increasing in population and the expense of their care is mounting.

Laws for the punishment of crime have no real deterrent effect upon mental defectives, and there has been a failure to check crime by law enforcement against this type of offender. Our Psychopathic Laboratory records show that, out of 779 cases in the Boys' Court, there were 654 suffering from dementia præcox, or about 84 per cent.; 109 psychopathic constitution, or about 13 per cent., and 10 epilepsies, or less than 1 per cent. In the Morals Court, out of 464 cases of females, 260, or 36 per cent., were dementia præcox; 92 psychopathic constitution, or about 19 per cent., and 4 epilepsies, or less than 1 per cent.

Out of 350 cases of males in the Morals Court, 107 were dementia præcox, 110 psychopathic constitution, and 4 epilepsies. Out of 657 cases of males in the Domestic Relations Court, 236 were dementia præcox, 295 psychopathic constitution, and 3 epilepsies. In the outside criminal branches, of 270 males, 107 were dementia præcox, 68 psychopathic constitution, and 5 epilepsies. Out of 152 females, 84 were dementia præcox, 41 psychopathic constitution, and 1 epilepsy. Observe, therefore, that dementia præcox plays the highest rôle and is the criminal psychosis par excellence.

Life has become unsafe by reason of the presence of this type in society, despite industrial precaution and efforts of police and courts. Their early and rapid multiplication increases the threat to civilization. All this is known to intelligent editors, physicians, lawyers, judges, and social workers. When these facts become common knowledge, protective legislation will be enacted. In Chicago we have sought to educate the public, by publishing accurate and scientific diagnoses of this type, made by a highly trained and competent expert, when they have been brought into court and convicted of serious crimes. The Chicago public now refer to dementia præcox for an explanation of brutal and gross criminal conduct, indicating absence of the normal emotions of the average person. Our press advocated and our legislature passed legislation for the segregation of mental defectives guilty of their second crime. The legislation was vetoed by the governor on the principal ground that no farm colony had been provided by the legislature. Such legislation, I am confident, will be passed by the next Illinois legislature.

Progress is being made in other states also. Psychopathic laboratories connected with the criminal courts of our large cities are rapidly disclosing to the public that hereditary mental defects lie at the bottom of most fundamental crimes. Industrial accidents due to mental deficiency are common enough to place the manufacturing, railroading, and building industries on their guard. The increasing cost of maintenance of the insane and mental defectives has attracted the notice of the taxpayer. The physician is being drafted into public office and his special knowledge of the havoc worked in our civilization by hereditary defectives will be reflected in the legislation and administration to curb the menace of inferior stock.

EUGENICAL FIELD INVESTIGATIONS AT WHITTIER, CALIFORNIA.

The California Bureau of Juvenile Research, of which Dr. J. Harold Williams is Director, is located at the Whittier State School. This Bureau has branch laboratories in all state institutions caring for children. It publishes the *Journal of Delinquency*, a bi-monthly technical magazine devoted to the scientific study of problems of social conduct. The Bureau also conducts research along psychological and eugenical lines.

Field investigation at Whittier State School began with the opening of the department of research in October, 1915, by Superintendent Fred. C. Nelles. At that time the research staff consisted of three persons—the psychologist, one field-worker, and one clerical assistant. The original field-worker was Karl M. Cowdery (E. R. O. '15), who is now director of education for Whittier State School. His original appointment was made for one year by the Eugenics Record Office, in accordance with the cooperative plan of introducing scientific family history studies then in effect.

The first field work was limited chiefly to the making of a rapid survey of special cases, particularly relating to those in need of special segregation or transfer to other institutions. The early histories were therefore brief, although the number of cases represented was relatively large. The field investigation directly followed the psychological examination, and supplemented the laboratory findings.

As soon as the preliminary survey was completed, work began on organizing and standardizing the method of investigation. The data for each case were divided into two sections: (1) personal or developmental history and (2) family history. For the family history the Eugenics Record Office method was followed without elaboration or change. For the personal history of the propositus an outline was adopted, which has been used consistently in the 426 histories obtained to date (Oct. 20, 1922). The outline includes 13 items, as follows: Chronological data; intelligence; temperament; other mental conditions; physical condition; moral character; conduct; associates; amusements; education; vocational record; home conditions; neighborhood conditions.

Each of the 13 items is divided into a number of sub-items, and a uniform order of presentation is followed in all cases. In *home conditions* and *neighborhood conditions* the uniformity of procedure is carried still farther, and standardized scales have been devised for grading the conditions found. These are the Whittier scales for grading home and neighborhood conditions, and are comparable with the many scales and tests now in use for evaluating mental and educational conditions. The research staff has also contributed to the standardization of intelligence tests, devised a scale for testing achievement in geography, and is participating in a joint investigation aiming at the development of moral character tests. Mr. Willis W. Clark, while sociologist on the staff, devised a scale for grading juvenile offenses.

Dr. Williams writes, "One of the important factors in the development of the social case investigation at Whittier is the high degree of cooperation and encouragement on the part of the Eugenics Record Office. It is the hope of the staff that the quality of its work will justify the permanence of this relationship."

CONFERENCE OF JUDGES IN INDIANA.

A Conference of the Judges of the Supreme, Appellate, Superior, Circuit, Criminal, Juvenile and City Courts of the State of Indiana was called at the House of Representatives at Indianapolis, on January 12, 1922, by Governor Warren T. McCray, who stated that the purpose was "to promote more uniformity in the administration of criminal law and to have a closer coöperation between the courts and the penal and reformatory institutions of the state." The meeting was attended by many judges, the prosecutors of a number of the courts, and most of the state penal institutional officials. The history of the various institutions for delinquents in the state was briefly reviewed and the purpose of each stated, and a plea was made that discrimination be used that offenders be committed to proper institutions. A discussion of facts concerning the present population of the penal institutions of the state showed that the number of admissions had been higher since the War, but that the average was less than it was ten years ago, even considering the increase in the population of the state. The relation of the returned soldier and the "crime wave" was discussed. This brought out that some of the ex-service men had not had a clean record before service, and that many ex-service men, at present in institutions, were suffering from mental disease resulting from War conditions. Further, the failures in the indeterminate sentences and the parole law administration loom much larger in the public eye than the successes, with the tendency on the part of the uninformed public to condemn the system. Statistics for Indiana, covering a long period of time, indicate that of each 100 paroled, there have been but 26 unsatisfactory cases.

The Governor also stated that he felt that Indiana should have a State Orphanage where scientific study of the child, including heredity and mental make-up, should be made during the course of the State's care of every child.

The Governor said ". . . we are now beginning to understand that a very large number of prisoners are either mental defectives—feeble-minded, epileptic or insane. At least one third of the State Prison population, including those in the Hospital for Insane Criminals, are mental cases, and we have reason to believe that almost as large a proportion of the population of the other State penal and correctional institutions is mentally subnormal. This is really one of our most serious problems. We need to recognize the feeble-minded when they come into the public schools, or at least when they are brought into court. Now we can only sort them out after they get into prison."

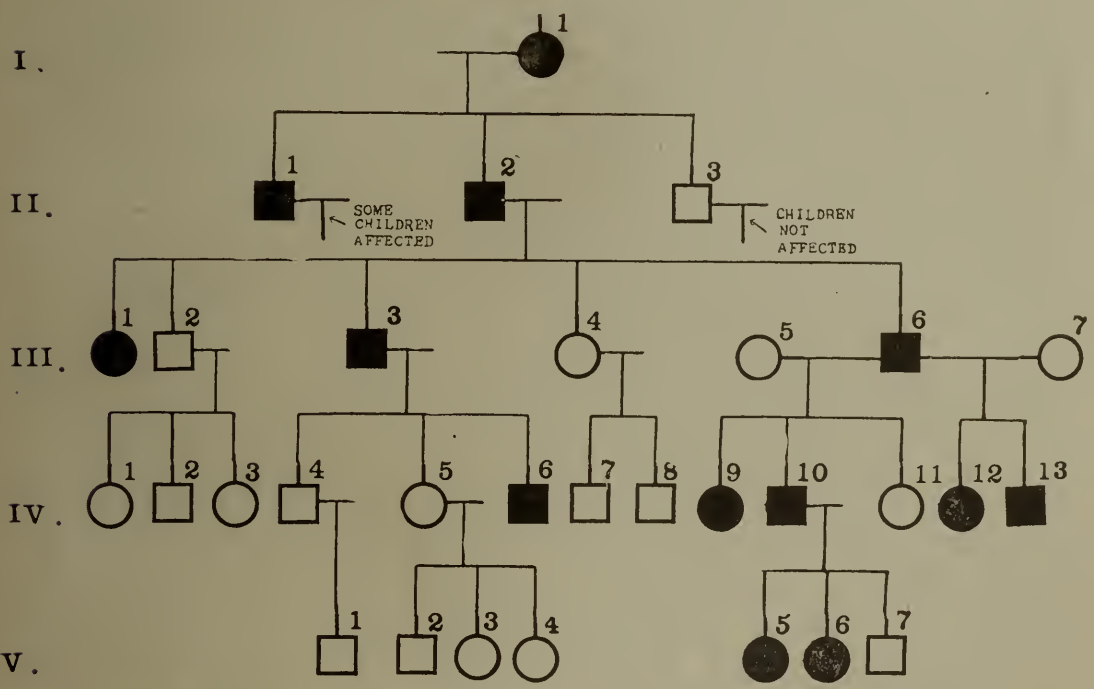
The Governor was followed by a representative, either a member of the board of trustees or the superintendent, of each of the state penal and correctional institutions. The parole and indeterminate sentence system, and educational and industrial training were defended by the men who were actually handling these problems.

Judge Hugo Pam of Chicago, after emphasizing the need of study of the family and life history of criminals, stated that this meeting was the first of its kind held in the United States and that he felt that it would do much good in assisting each of those present to understand the problems of others. ARTHUR H. ESTABROOK.

MYOTONIA CONGENITA (THOMSEN'S DISEASE).

In the *American Journal of Medical Sciences* (Vol. 140, p. 80, 1910) Julius P. Sedgwick of the University of Minnesota reports a family of the oldest New England stock, in which there is a high incidence of Myotonia congenita accompanied with von Graefe's sign. In five generations thirty-one persons are recorded; of these, thirteen—seven males and six females—are affected. Thomsen's disease (named from Asmus Julius Thomsen, a Danish physician), technically known as Myotonia congenita, is a disease which is commonly congenital and highly hereditary. It is characterized by tonic spasm or rigidity of the muscles, coming on when these tissues are first put into action after a period of rest. With use, the stiffness gradually wears off. Specifically, von Graefe's sign, or symptom (Friedrich W. E. A. von Graefe, German ophthalmologist), is the failure of the upper lid to follow the eyeball in glancing downward.

From the analysis of this particular family, it appears that Thomsen's disease is a simple Mendelian dominant, and is, in no manner, sex-limited. The typical characteristics of a dominant trait are shown by the fact that the trait never skips a generation. When it drops out of the family, it is permanently lost to the descendants, unless it again enters by mutation or by marriage with affected stock. Also in particular fraternities there is a relatively great number of affected, compared with unaffected, children. Dominance is again nicely shown by the case of III–6, an affected man who twice married, each time an unaffected wife; but by both wives he had affected children.



OLD NEW ENGLAND FAMILY SHOWING VON GRAEFE'S SIGN IN MYOTONIA CONGENITA (THOMSEN'S DISEASE).

The shaded symbols represent members of the family who are affected with Myotonia congenita and von Graefe's symptom.

PROSTITUTION AND THE VENEREAL DISEASES.

The American Social Hygiene Association has been investigating the question of Prostitution for many years. The material collected by this organization, together with that of other authorities, supplies the following points which should be of prime interest to every one:

Thirty-three per cent. (33%) of all prostitutes are feeble-minded. Ninety per cent. (90%) of all syphilitic infections in men are derived from the prostitute, either professional or amateur. Fifty per cent. (50%) of all syphilitic women are infected innocently. Seventy per cent. (70%) of women who came to the New York Hospital for venereal disease treatment were respectable married women infected by their husbands. Eighty-five per cent. (85%) of married women who have syphilis have contracted it from their husbands. Fifteen per cent. (15%) of all first admissions to the New York State Hospital for the Insane are traceable to syphilis. One hundred per cent. (100%) of all paresis cases (general paralysis of the insane) are directly due to syphilis. Ninety-eight per cent. (98%) of all white prostitutes have at least one venereal disease. Two out of every thirteen deaths in the United States to-day are directly or indirectly caused by syphilis. About five per cent. (5%) of children who are idiotic became so because of syphilis. Syphilis and gonorrhea cause over fifty per cent. (50%) of the blindness in children according to English statistics. In this country it is estimated that over fifty per cent. (50%) of the children blind, from birth, owe their blindness to gonorrheal infection. Deafness in young people, British statistics show, is due to syphilis in thirty-three per cent. (33%) of the cases. In 1910 it was estimated that there were 1,800,000 insane persons in the United States, and that twelve per cent. (12%) of this insanity was caused by syphilis.

CANCER IMMUNITY.

C. Lewin (*Medizinische Klinik*, Berlin, July 30, 1922) calls attention to two new elements in cancer research, namely, the so-called protein therapy and an appreciation of the fact that white corpuscles are of essential importance in the resistance of the body to malignant growths. His experiments for the last three years have been following these lines. His conclusion is that artificially induced leukopenia favors the growth of cancer while leukocytosis checks it.

In reference to immunity, he reports that in a group of twenty-one unimmunized mice inoculated with cancer, this disease developed rapidly in all but four. In another group of twenty mice that had been given parenteral injection of from 0.5 to 1 c.c. of a 2 per cent. solution of nucleic acid before they were inoculated with the cancer, no cancer at all developed. (*Jour. Am. Med. Asso.*, Sept. 30, 1922.)

ISOLATED ALBINO FRATERNITY.

This office has lately received a Family-Tree Folder (Car-27) filled out with evident pains and intelligence by a member of the family. In the third generation appears a fraternity of 7 children, of whom 4 (2 male and 2 female) are typical albinos. There are 95 other persons described in this family, none albinos. Apparently no other case of albinism is known in the family network. The four grandparents of this fraternity were all born in Ireland. They have different surnames; hence the parents are probably not close relatives. All had blue eyes and "brown" hair. The father

belongs to a fraternity of 9. All who grew up have a blond skin color; all but one have blue eyes; the hair color is mostly "brown"; in one it is "fair" and in one it is black. The father has blond complexion, clear blue eyes and dark brown hair, has chronic "kidney trouble." The mother belongs to a fraternity of 7. All have blond skins, blue eyes, brown hair, except one "blond haired" and one who has red hair. The mother is blond, blue eyed, and dark brown haired. She suffers from rheumatism; is easily excited. So far there is no evidence that the albinic defect occurs in the two parental stocks. The only thing suggesting albinism in other members of the family is red hair in aunt and maternal first and second cousins of the central fraternity. There are four cases of such red hair on the maternal side. There are three cases of red-haired persons on the paternal side. Two are consorts of outside blood and the third is a daughter of one of these consorts. However, the daughter would probably not have shown red hair had not both parents carried the determiner for it or for absence of brown pigment. Thus on both paternal and maternal sides there is an occasional absence of formation of brown pigment. Possibly the albinism may be due to the union of gametes with genes for no brown and no red pigment, thus producing white hair.

HEREDITY AND ENVIRONMENT.

You will be interested to know that we now have a "functional" group of fourteen hundred people from the State Hospital for the insane at Trenton upon whom we have operated for the removal of local foci and that a study of this group reveals, I believe, a closer relationship between the mental condition and the physical infection than I had ventured to hope existed. It does not, of course, in any way supplant or supercede the theory of personality inheritance, but from my limited knowledge I should suppose may very greatly strengthen it. Particularly may this support come from a study of the cases requiring colon resection, many of whom appear to have congenital colon deformities which predispose to extensive colon pathology. May not such deformities be dominant and therefcre transmissible? If so, we have a possible explanation of the occurrence in families of so-called "functional" psychoses which are often arrested by colon resection, and which had been formerly looked upon as a personality inheritance. If we cannot have function without form, so we cannot have abnormal function without abnormal form. I think that a better knowledge of the colon may help us to understand the transmission in certain families of serious mental abnormalities. I shall have some material in the near future and hope to have the privilege of talking with you about it. (Extract from a letter by Dr. John W. Draper, New York.)

ZYGODACTYLY.

The fœtal foot is, at an early stage of development, normally webbed; in the adult the toes become separate, but digits 2 and 3 not rarely remain more or less united. Schultz gives (in *Jour. of Heredity*, for March) 3 pedigrees of syndactylous families and concludes that no generation is skipped and that webbed females are less apt to have syndactylous children than webbed males. But webbed females may have syndactylous offspring; and so Schultz concludes that this fact tells against Castle's hypothesis that the gene for the trait is carried in the Y-chromosome.

THREE PAIRS OF ANTONYMS.

Distinction is often made between phenotype and genotype; the former referring to the appearance of an organism with respect to a character under consideration; the latter referring to genetic constitution with respect to factors influencing a given character. On account of environmental effects or chance conditions of development, organisms may have similar genotypes but differ phenotypically. Moreover, due to dominance in the heterozygote, similar effects of different Mendelian factors, or effects of environment, organisms may differ genotypically, while resembling each other in phenotype.

Distinction is also made between eugenics and euthenics; the former referring to those agencies under social control which will improve racial or genetic qualities, in other words improve the genotype; the latter referring to those agencies which will improve the environmental conditions.

Eugenic agencies then are those which tend to produce eugenic individuals, individuals of superior genetic quality, while dysgenic agencies are those which tend to produce dysgenic individuals, individuals of inferior genetic quality.

An organism may be superior to another in appearance, due to good feeding, care, etc., in short to euthenic conditions, while it may be actually of poorer stock genetically. We may therefore say that while it is relatively *euphenic*, it is nevertheless dysgenic. On the other hand, due to neglect, accident, etc., an organism may be of poor appearance, *dysphenic*, while actually it is eugenic.

A favorable environment has been called euthenic. Similarly an unfavorable environment may be called *dysthenic*.

A eugenic constitution and euthenic conditions tend to produce euphenic types, while a dysgenic constitution and dysthenic conditions tend to produce dysphenic types.

An inbred high-grade homozygous line may throw dysphenic individuals which are more eugenic than the most euphenic individuals of another stock.

The writer has obtained in his experiments with the parasitic wasp, Hadrobracon, defects of numerous sorts in wing venation, eyes, antennæ, body segments, digestive tract, legs and genitalia. When wasps showing these defects are able to reproduce, the progeny are as normal as the average of the parental stock. A normal from defective stock, euphenic but dysgenic, produces more dysphenic offspring than a defective from relatively normal stock, dysphenic but eugenic.

Application of this principle to practical problems should of course be made only with the greatest caution. (*P. W. Whiting. Department of Eugenics, Child-Welfare Research Station, State Univ. of Iowa.*)

A LITTLE CHILD TO TEACH THEM.

The Bureau of Educational Experiments is now maintaining a nursery school for children between 18 and 36 months. The primary purpose of this school is the study of infant development. One inquiry it makes is: Is the difference observable in babies at 3 years due to diverse environmental influences, or had they, as babies, these different action-patterns from the beginning? The study of growth is in charge of a staff consisting of a physician, a psychologist and a social worker to gather home histories. The school provides a good equipment for play. Daily records are kept of sleep, urination and defecation, appetite, social contacts, emotional reac-

tions, language and music. Finally a record is kept of bodily control, social control, associative memory and language. The organization seems good. Let us hope that the observers will be full of hypotheses, fertile in expedients and pertinacious in endeavor.

THE EDWARDS BLOOD.

Dr. Marion Edwards Park, the new president of Bryn Mawr, is a member of the Edwards family. The *Philadelphia Inquirer* of October 21 says: "Bryn Mawr, apparently, is under the direction of a capable leader, who is the descendant of notable ancestry. Among distant forbears is Jonathan Edwards, the great New England divine; in collateral and lineal lines many of her ancestors were associated with the religious and educational work; her brother, Dr. Edwards A. Park, serves his alma mater as a professor of pediatrics at Yale. The head of the line of Edwards, Timothy, the father of Rev. Jonathan Edwards, was a minister and graduate of Harvard's Class of 1691. Beyond that the ancestral line runs to Wales and thus there is a sentimental affinity between the College with the Welsh name, located in part of the old Welsh Barony, and the new leader."

AMERICAN ANTHROPOMETRY.

An anthropometric study of the population of the United States is reported on by Franz Boas (*Jour. Amer. Statist. Assn.*, June, 1922, pp. 181–209). He stresses the mixed nature of European countries, which thus do not so much differ from the American. The effect of environment on selection of races is noted. The author's attitude toward eugenics is critical. For investigation he recommends first the degree of homogeneity of the population; second, the hereditary characteristics of the existing lines; third, the influence of environment; fourth, the influence of selection. One trouble with this formulation of the subject is that one cannot study heredity and environment separately, since heredity determines reaction to environment; or, the effect of environment is determined by the hereditary or racial constitution.

FOREIGN WHITE STOCK IN LOS ANGELES.

On October 31, the Bureau of the Census issued a statement of its analysis of the foreign white stock in Los Angeles, by mother tongue: 1920 and 1910. This report shows a *decrease* in per cent. distribution of the English and Celtic tongues from 38.6 to 34.3; of the Germanic from 24.5 to 18.6; of the Scandinavian from 7.6 to 7.3, and of the French from 4.4 to 3.5; and *increases* of the Italian from 5.0 to 6.2; of the Spanish from 7.3 to 13.3; of the Roumanian from 0.2 to 0.4; of the Greek from 0.4 to 0.5; of the Russian from 0.2 to 3.5; of the Armenian from 0.3 to 0.4, and of the Assyrian from 0.2 to 0.3. The Hebrew and Yiddish remained stationary at 4.2.

GHEEL—AN ASYLUM TOWN.

The feeble-minded, like the poor, we have always with us and we have had from remote antiquity. But the method of handling them has varied at different epochs. The village of Gheel in Belgium, near Antwerp, is one where feeble-minded children have been segregated since the fourteenth century. There are also some insane. The families who live there and on the surrounding farms have, during this time, had the custom of receiving and caring for the feeble-minded and insane, and for this service they are paid, either by the relatives or, it may be, by municipalities. The area is divided into four sections, each under the control of a superintendent and a physician.

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THE TERM "MENTAL DEFECTIVE."

The Crime Prevention Bill which the Municipal Court of Chicago is asking the Legislature of Illinois to enact, defines the term "mental defective" to mean:

"*a*. A person who has a defect of intelligence, or

"*b*. A defect of affectivity or emotion, or

"*c*. A defect of will, of such a degree that he has criminal propensities, and while at large is a menace to the person and property of others."

"There is every reason to believe that the next Legislature will take the lead in enacting a law under which incorrigible criminals with mental or moral defect will be segregated, instead of giving them the cat and mouse treatment which leaves them free at intervals to prey on society. This will mark the first step in the scientific prevention of crime and will carry the findings of the Psychopathic Laboratory to their concrete application." (From the Fifteenth Annual Report of the Municipal Court of Chicago, 1921, page 10.)

SELECTIVE ELIMINATION.

A. C. Abbott, writing in *Science*, October 6th, explains the current remarkable small death rate from tuberculosis on the ground that: "The pandemic of influenza of 1918–19 carried off, in a brief period, a large number of tuberculosis subjects that would otherwise have lived on and their deaths been so distributed through later years as not materially to have disturbed the uniform downward direction of the tuberculosis curve that preceded the period of the great pandemic.

"From the standpoint of results, advantageous to the race alone, and disregarding all humane considerations, this may be viewed as the beneficent influence of a great plague. The least resistant of the population succumbed, those more resistant and physically better fitted to survive did so. The human material thus left is probably the most promising that has existed for generations, in so far as the permanent lessening of tuberculosis among it is concerned; and we can expect that the curve for tuberculosis death rates in the future will be for a time much more sharply downward than ever before, and that its average level for a number of coming years will be much lower than that preceding the epidemic of influenza, providing, of course, there is no abatement of those widespread activities that have been so instrumental in lessening the incidence of the disease in the past."

NOTES AND NEWS.

An International Geographical and Ethnological Congress will be held in Cairo, Egypt, in 1925.

Mental alertness tests were made on 1,000 freshmen entering Northwestern University, of which Dr. Walter Dill Scott is president.

UNITED STATES INFANT MORTALITY, 1921.

According to a preliminary announcement of the Bureau of the Census, the birth registration area of the United States for 1921 shows a birth rate of 24.3 per 1,000 population, a low record death rate of 11.7 per 1,000 population, and a low record infant mortality rate of 76. The total population of the birth registration area for 1921 is given as 70,425,705; the number of births, 1,714,261; the total deaths, 825,511; and deaths under one year of age, 129,588.

STERILITY IN HYBRIDS.

In hybrid moths the females are sterile; in hybrid cattle the male is sterile. J. B. S. Haldane of Oxford argues in *Journal of Genetics* for October that when in the F_1 offspring of two different animal races one sex is absent, rare or sterile, that sex is the heterozygous sex. He states that, according to Doncaster ("The Determination of Sex"), color-blind men have an excess of daughters by normal women.

A EUGENIC RACE.

Cho Wang in the March *Journal of Heredity* ascribes the excellent heredity of the Chinese to the mixing of many highly endowed tribes, to selective elimination through disease and famine in this over-populated country, and to various eugenic mores, such as ancestor worship, large family system, early marriage, etc. There are, it may be added, those who would like to see introduced into China a reduced death rate and a reduced birth rate, fondly believing that that will bring about the same result!

FAMILY DEGENERACY AND FIELD STUDY.

Mrs. Nellie Stermer-Koulik was recently indicted by the Chicago grand jury, charged with wholesale poisoning. Chief Justice Harry Olson of the Municipal Court called upon Dr. William J. Hickson, the head of the Psychopathic Laboratory of this Court, for a psychiatric report on the woman and any of her near kin. Dr. Hickson reported that the intellectual level of the woman was that of an eleven-year-old child; that Martin Stermer, one of Mrs. Stermer-Koulik's three sons, was examined by the Laboratory in 1918 and found to be feebleminded. This boy had spent three months at the John Worthy school, had appeared before the Juvenile court on two occasions, and had served two sentences at the Pontiac Reformatory. The second son, Joe, has been before the Juvenile court three times. The third son, John, is now out on probation from the Pontiac Reformatory, "to which he was sentenced in 1918 for robbery with a gun." In connection with this case, Judge Olson said, "if we had had a field worker, an eugenics expert, to check up on the history of this whole family at the time one moron was discovered, then the police might have been warned to watch this woman and so might possibly have prevented some of these crimes. We are going to apply soon to the Eugenics Record Office of the Carnegie Institution for such a worker, and then, when we find one case, we can seek out and locate the nest." (*Chicago Tribune*, November 21, 1922, verified by Judge Olson.)

THE CHROMOSOMES OF MAN.

Prof. Theophilus S. Painter,
University of Texas.

"How many chromosomes has man?" and "Is sex determined in man, as in the insects, by means of sex chromosomes?" are two questions which have aroused interest in popular as well as scientific circles and have been much discussed for some twenty years. Both of these questions have been the subject of careful studies, but there has been no unanimity of opinion among observers on either of the points involved. The chromosome number has been variously reported as 16, 22, 24, and even as high as 47, while sex chromosomes of all possible types have been described. In practically all of these studies "stale" testes were used for investigation.

It was the good fortune of the writer to obtain from the castration of a white man and of a negro perfectly fresh testes, which were preserved by a special technique within a half minute after the blood supply had been cut off. The main results of a study of this tissue were presented to the Second International Eugenics Congress in the form of the chart reproduced on the opposite page. A brief description of these figures follows.

Figures 1 and 2 are spermatogonial divisions (this is the period when the full number of chromosomes are seen) taken from the testes of a white man, and Figs. 3 and 4 like stages taken from negro material. There are 48 chromosomes in each of these cells and numerous counts on other cells, not figured in the chart, have shown that this is the correct number. Among these 48 chromosomes are two sex chromosomes of the so-called X-Y type. The Y-chromosome (the male determiner) can be readily identified because of its small size, and is labelled in Figs. 1 to 4. The X-chromosome (female determiner) is a short rod-like body which cannot be distinguished at this stage from other chromosomes of nearly the same size and shape.

In order to facilitate a comparison of the two races, the chromosomes of the white man (Fig. 1) and those of the negro (Fig. 3) have been copied separately and arranged in the approximate order of their size and shape. By comparing Fig. 5 (white) with Fig. 6 (negro) it will be seen that the chromosomes of the two races are essentially alike in number and in general form. The point is one of some interest because it has been suggested that the white man has twice as many chromosomes as the negro. Such a view, of course, is no longer tenable.

The "reduced" or haploid chromosome number, seen during maturation, is 24, as is shown by Fig. 7. During the first maturation division we have the crucial evidence for the presence of sex chromosomes of the X-Y type. At this time we find that 23 of these haploid chromosomes are "tetrads," while the 24th element is made up of two components very unequal in size. See Fig. 8 (white) and Fig. 9 (negro); not all of the tetrads are shown in these two figures. These unequal-sized components are the sex chromosomes, the "X" being rod-shaped and the "Y" more or less ball-shaped. Now, while the tetrads divide so that the daughter cells will receive equal parts of them, the X and Y elements simply segregate to opposite poles of the cell (see Fig. 9—white, and Fig. 10—negro), so that the two cells resulting from this division (secondary spermatocytes) will contain, in addition to the twenty-three chromosomes, either an X or a Y chromosome, but

The Chromosomes of Man.

never both of these sex elements. As a result of this segregation, the spermatozoa, when they are finally formed, will carry either a "Y" or male-determining element, or an X or female-determining element, but it is impossible for such a spermatozoön to carry both. If a spermatozoön carrying a Y-chromosome fertilizes an egg, the sex will be male. Conversely, if a spermatozoön carrying an X-chromosome fertilizes an egg the sex will be female.

The discrepancies found in earlier studies on the questions of chromosome numbers and sex determination were probably due, as we now view the matter, in part to an inadequate technique, but mainly to the use of tissue, such as that obtained from executed criminals, where the testes have remained in the body for half an hour after the death of the individual. During this delay the sensitive germ cells, apparently, undergo a certain amount of necrosis which results in more or less fusion of the chromosomes. When perfectly fresh material is used, together with an adequate technique, a complete study of the chromosomes can be made.

On the basis of this study, we may answer now, without hesitation, the two questions stated at the beginning of this note. The number of chromosomes in man is 48 (diploid or somatic number) and sex is determined in man, at the moment of fertilization, just as it is in insects, it being simply a matter of which type of spermatozoön fertilizes the egg. Since the X-carrying and Y-carrying spermatozoa are equally as numerous, there is in man a 50–50 chance in favor of either sex. There is no way known in which this ratio can be modified.

The completer account of this work is now in press.

A FUNCTIONAL Y-CHROMOSOME?

That the Y-chromosome probably carries a gene for the black spot on the dorsal fin of the little fish *Libestis reticulatus* is demonstrated by Winge of the Genetic Laboratory of the Royal Veterinary and Agricultural College, Copenhagen, in *Journal of Genetics* for October. This male spot passes through the generations confined to the male sex—thus it is a sex-*limited* character. It is not quite clear, however, that the inheritance of the black spot is different from that of the beard in man; and the factor for this quality can reside in the female gametes.

THE EVOLUTION OF MAN.

There is a great popular interest just now in the origin and probable fate of the human species. Very timely, accordingly, is a collection of essays on human evolution by students of its different phases. Professor R. S. Lull contributes a brief, but up-to-date summary of our knowledge of prehistoric man. Dr. H. B. Ferris describes human embryological development and variation. Professor G. H. Parker writes briefly of the nervous system and its history. President J. R. Angell discusses some problems in the evolution of intelligence. Dr. A. G. Keller considers "Societal Evolution" and the origin of the "mores." Professor Conklin treats of the "Trend of Evolution" and the consequences of reduced fecundity of the better-endowed classes and the protection of the race from the action of selective elimination. These are all interesting essays, by thorough scholars and, as such, deserve to be widely read.

The Evolution of Man. A series of lectures delivered before the Yale Chapter of the Sigma Xi. New Haven: Yale Univ. Press. 1922. 202 pp. $3.00.

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